SEPTEMBER, 1965

AIRFIX magazine

FOR PLASTIC MODELLERS

MONTHLY 1'6

IN THIS ISSUE

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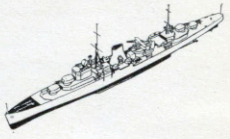

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AIRFIX magazine

FOR PLASTIC MODELLERS

Volume 7, Number 1 **September, 1965**

CONTENTS

COVER PICTURE

America's first three-engine airliner since the Ford trimotor of the early 1930s, the Boeing 727 entered scheduled service early in 1964. Powered by Pratt & Whitney JT8D turbofan engines, each developing 14,000 lb of thrust, the 727 has a maximum flight Mach number of .90—nine-tenths the speed of sound. It operates with ease from runways of 5,000 feet, and is now in service with more than ten airlines. Airfix's new 1:144 scale kit of the 727 is described this month on page 4.

Editorial Director ..... **JOHN BLUNSDEN**
Editor ..... **DARRYL REACH**
Assistant Editor ..... **DOUGLAS NYE**
Advertisement Director ... **PATRICK STEPHENS**

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EDITORIAL OFFICES
Brands Hatch Circuit, Fawkham, Dartford, Kent
Telephone: West Ash 336

ADVERTISEMENT DEPARTMENT
3-4 St Andrew's Hill, London, EC4
Telephone: CITy 4288

CIRCULATION DEPARTMENT
Surridge, Dawson (Productions) Ltd,
136/142 New Kent Road, London, SE1
Telephone: RODney 5480

The 1:144 scale Airfix Boeing 727 kit comprises 62 parts and sells at 4s 6d. A 26-item full-colour transfer sheet is included with the kit, depicting standard TWA insignia.

Boeing 727, DUKW and Sting Ray

NEWS FROM AIRFIX

The world's greatest value in construction kits

THIS month's three new Airfix kit releases cover a wide variety of subjects, with something to interest enthusiasts for aircraft, military vehicles and cars. Added to the 1:144 scale aircraft Series B is a fine kit of the Boeing 727 airliner; the range of OO/HO scale military vehicles is joined by a replica of the DUKW amphibian; and miniature motoring modellers should be well pleased with the new 1:25 scale kit of a Chevrolet Corvette Sting Ray.

BOEING 727

THE 62-part Boeing 727 kit is moulded in silver grey and transparent plastic and incorporates a host of minute detail, plus a number of moving parts. The wheels of the tricycle undercarriage revolve, beneath the tail there is a hinged staircase which can be raised and lowered in realistic style, and the high-mounted tailplane is hinged on the fin, enabling it to be swivelled just like the prototype control surface. A number of options are another feature of the kit, with two doors and a cargo hatch that may be cemented in either the open or closed positions, together with the choice of a lowered or retracted undercarriage.

Transparent parts include the cabin windows (there are more than 60 of them) and the flight deck screen, while a two-part display stand, again made from clear plastic, is another item included with the kit. Silver grey plastic parts incorporate plenty of etched detail, with panel lines and control surface divisions all represented. Other features are the various antennae of a modern airliner, a tail-bumper, flap fairings and, of course, the huge outrigged tail engine-pods of this advanced trimotor airliner.

The usual comprehensive painting and assembly instructions are provided with the kit, together with a capsule containing ample cement to complete the model. A 26-item full-colour transfer sheet is included, while a small plastic punch is another useful aid to the modeller, allowing him to affix the long side flashes of the TWA insignia provided, and then to punch out the window apertures with the tool. The window transparencies are then fitted into the holes and the end product is a neat, well-finished model.

In its long history, Trans-World Airlines has operated a number of aircraft with novel features. There was the Ford Tri-Motor with three engines, the Northrop Alpha with 'clean' wings, and Martin aircraft with rear stairs. Now, they have 16

Boeing 727s in service, which combine all these features, and another six on order, due to be in operation by early 1966.

In addition to a high cruising speed and good payload, the 727 has a usefully short take-off and landing run, and a number of advanced high-lift devices have been incorporated into the design. These combine to give the airliner its exceptional lift qualities, just when it needs them most. Its spacious cabins can seat 94 passengers in two classes, and the ingenious 'Airstairs' unit in the tail greatly facilitates boarding and deplaning.

The Boeing 727 has a wingspan of 108 feet and a length of 134 feet. Dimensions of the 4s 6d Airfix model are: span 9 inches, length 11¼ inches.

DUKW

LATEST Airfix OO/HO scale military vehicle kit is the DUKW amphibian. This 50-part kit is moulded in olive green and transparent plastic, and included in the price of 2s is a ten-item colour transfer sheet and the usual full painting and assembly instructions.

Basic unit of the kit is a one-piece chassis. On to this fit two sides to form the hull, and then the interior fittings, a driver, decking, suspension, wheels, propeller, spats and deck accessories are added to the assembly. The customary military vehicle detailing is found on these parts, such as tyre treads, a winch and hawser, tools, a hatch and rubbing strips.

Moving parts include the six revolving wheels and a swivelling machine gun on a ring mounting above the driver's head. Transparent plastic forms the full-width windscreen and the minute headlamp lenses, while other detail featured includes a pump, splash guard, anchor, fenders and a detachable tilt. The completed Airfix DUKW is 5 inches long.

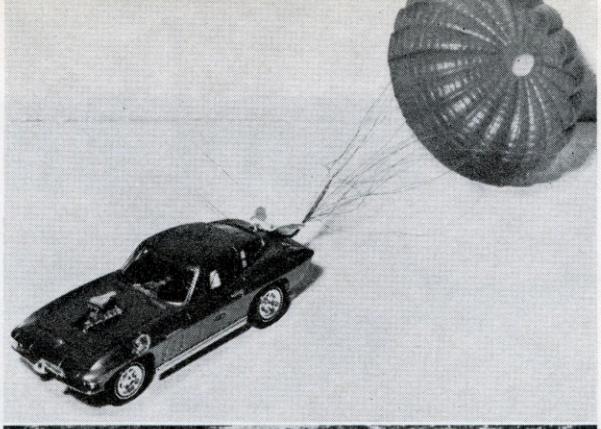
An American-designed and developed vehicle, the DUKW amphibian was based on a 2½ ton General Motors 6×6 truck. It became one of the most valuable and widely used vehicles of the Second World War and, fully-loaded, it could carry either 25 fully-equipped troops, or 12 litter cases or 5,000 lb of cargo. The British Army first used them in the landings on Sicily, and they later saw service on the beaches of Anzio and Salerno and during the Normandy landings. After the war, they continued to do useful work, particularly in rescue and relief operations during floods.

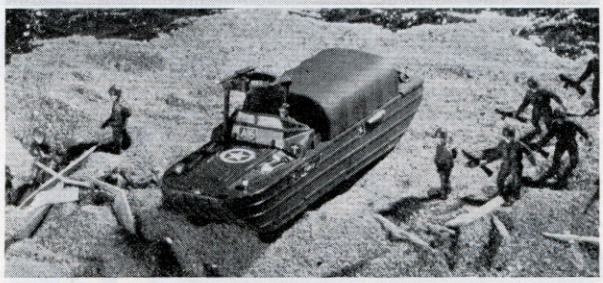
The DUKW was 31 feet long, and its 93 hp engine gave it a top speed of 50 mph on land and six knots when afloat. Defensive armament, when carried, usually consisted of one .5 inch machine gun.

CORVETTE STING RAY

AN unusual addition to the Airfix ranges of plastic kits (and one that should prove most popular), is the new 1:25 scale Chevrolet Corvette Sting Ray. This 131-part kit, which includes many chromed parts, was created in the United States by MPC and is made in this country by Airfix.

The Chevvy has numerous attractive features, and these include such things as a 'driver', operating front suspension (which has working moulded coil springs), an opened drag-braking parachute, 'rubber' tyres, steerable front wheels and a number of optional extras. The model may, in fact, be built as a road car, a road-racer or a drag racing 'special'. These changes are made by fitting different parts to the engine to represent any one of three various units, by fitting alternative tyres, and by adding a different bonnet.





Top: *First 1:25 scale car to be made by Airfix is this 131-part Chevrolet Corvette Sting Ray, here seen in drag-racing trim with braking parachute.* **Above:** *Joining the OO/HO scale military vehicles range is this 5 inch long, 50-part DUKW.*

The body shell of the car is moulded in one piece, and includes such detail as doors, handles, louvres, insignia and 'Fuel Injection' and 'Corvette Sting Ray' flashes. The all-round independent suspension is quite complex and is built up from more than 20 parts. When assembled, it operates smoothly, and the wheels revolve well.

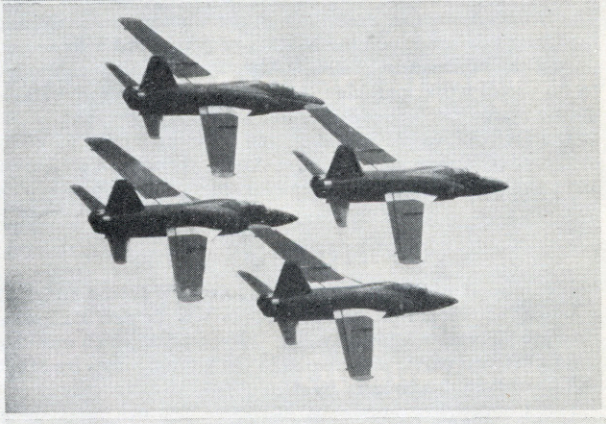
Interior features include bucket seats, safety belts, pedals, gear and handbrake levers, a steering wheel, detailed moulded dashboard and mirrors, while options here include a 'roll-over' cage, racing fire extinguisher and a competition fuel tank. A particularly attractive idea is the insertion of coloured red tail-light clusters into 'chromed' fairings, these assemblies then being cemented into the body. This gives a most realistic representation of the prototype car's rear lights.

If the modeller chooses to build the drag version of the car, a thin red plastic drag parachute is provided to give yet another touch of realism. With this rigged to the car with thread, the intake of a supercharged engine poking through the bonnet, and fat drag tyres on the rear wheels, the car looks really impressive. A comprehensive 24-item full-colour transfer sheet rounds off the whole thing, and the price of this bumper, 6¾ inch long car kit is 12s 6d.

SHOOT NOW!

Modellers are reminded that the closing date for entries in the exciting free AIRFIX magazine model photographic competition is September 6. So time is running short if you want to win one of the many valuable prizes offered. Turn to page 19 for details of how to enter, and see what wonderful prizes your pictures could win.

Above: *Old kite—new colours. A Douglas C-47 Dakota, of the Royal Canadian Air Force Training Command, shows the recently introduced RCAF tail marking corresponding with the national flag of Canada. The aircraft serial '651' appears below and the word 'Dakota' above the emblem.* **Below:** *Friendly relations—the TF-9 Cougar of the Blue Angels team 'wears' a Union Jack at RNAS Yeovilton. In diamond formation, the Blue Angels were photographed during their aerobatic show at RNAS Yeovilton. Seeing is believing—the Skymaster support aircraft of the Blue Angels team sported a flagpole behind the cockpit!*



ONE of the interesting things about historic aircraft is that new discoveries are being made every few weeks in some place or other, and the fascination of finding 'new' ones adds a lustre to this hobby that other facets of aviation sometimes lack.

Most historic aircraft in the United Kingdom have been 'discovered' in recent years. With the interest that the enthusiasts have for this subject it is hardly likely that there are many more left. On the other hand, in other countries there are still many aircraft which warrant the historic label that remain hidden and lost to the many interested people who delight in preserving things from the past.

An example that came my way recently was the discovery of a Messerschmitt Bf 109G in mint condition in Australia. Mr Norman Wiltshire, while on a visit to England, told me how this aircraft, believed to be a G-12, came to be captured in Italy during the later stages of the war at a German depot airfield. It had only just been delivered from Weiner Neustadt after a complete overhaul and was still in its packing case. The aircraft, together with a spare engine and two other Bf 109s, was crated and sent to Australia for exhibition purposes. The other two, both believed to be Bf 109Es, were placed on show, but the G was left crated at a supply depot until it was discovered in 1963 and auctioned.

An instructor at the Illawarra Flying School, Bankstown, a suburb of Sydney, bought it with the intention of flying it, but the Australian Department of Civil Aviation had other ideas and refused a permit to fly. The 109 was then resold to a Mr Sid Marshall, the Australian equivalent of our own Peter Thomas, who intends to start his own aircraft museum. Sid also has most of a Nakajima Hayabusa Ki43-1 and a Spitfire F VIII.

The ex-Luftwaffe aircraft is in excellent condition. Everything, down to the last nut and bolt, is original. The engine has only been bench-tested since overhaul. Unfortunately, the aircraft does not carry any unit markings, presumably since it came straight from the overhaul depot. The only distinguishing marks are what is thought to be the Werke number on the fin, which is 163821. The aircraft has been so well preserved in its original packing case that pencilled remarks are still legible on various parts of the tail unit.

Mr Wiltshire, the source of my information, tells me that he knows of two other Bf 109s, this time in South Africa. The Johannesburg War Museum has a very battered example of a 109E standing on its nose outside one of the exhibition halls. This is still in its original markings, though the ravages of time have taken much of the paintwork off. The other example, also an E variant, is preserved inside the museum and has been repainted in colours which, although they look authentic, are open to question.

NEW SKYHAWK

BRIEFLY mentioned in our Paris Air Show report, the new TA-4E trainer version of the Skyhawk made its first flight on June 30 at Palmdale, California. The aircraft seen at Paris was, in fact, a wooden mock-up of the real aircraft, 35 examples of which have been ordered for the US Navy at an estimated cost of 27.4 million dollars.

Douglas Engineering pilot H. H. Knickerbocker Jr was at the controls of the TA-4E when it made its maiden flight. The aircraft's functional systems and instrumentation were tested during the flight and its general stability characteristics evaluated at altitudes between 10,000, 15,000 and 35,000 feet and at a speed of 345 mph, which is about 60 per cent of full power.

The first flight of the TA-4E was two months ahead of schedule, and occurred only nine months and 23 days after the start of design work. The first production aircraft should reach the US Navy in February.

The Skyhawk Trainer is the fifth in the series of attack aircraft developed by the Douglas company. It is known in the US Navy as the 'Wee-jet', and is one of the few aircraft in present-day service not needing a folding wing section for accommodation on board carriers. The trainer version will fulfil a replacement need—now almost 10 years overdue—for a US Navy advanced jet trainer.

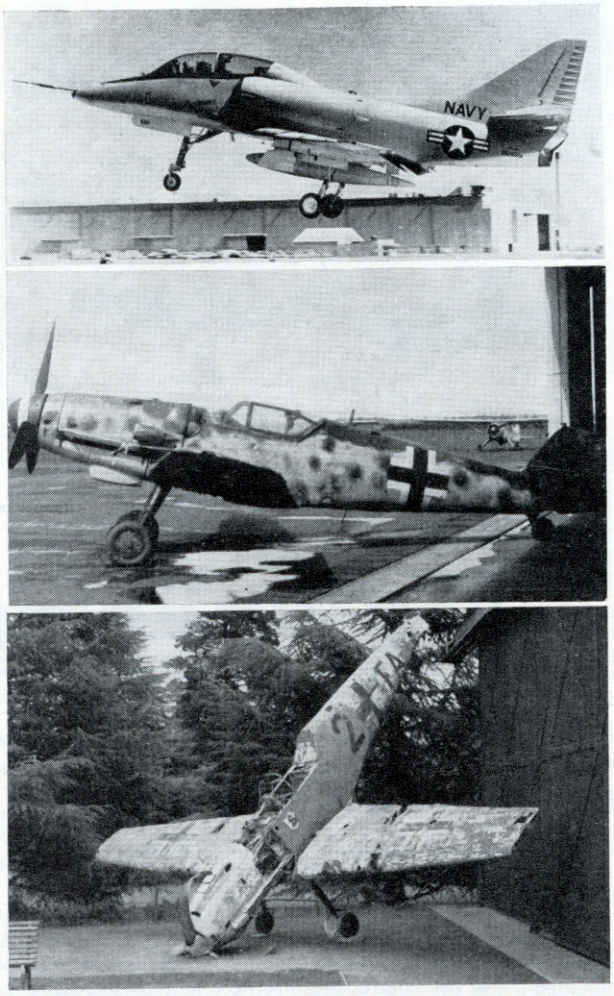
For the model maker, the TA-4E is a gift. The Airfix kit of the Skyhawk is one which, up to now, has been of little use for the conversion enthusiast. With an addition of just over two feet to the length of the fuselage, and a new canopy, the modeller should be able to convert the existing kit into the trainer version, and I hope later to be able to describe a method of doing this in one of my regular aircraft kit conversion articles.

BLUE ANGELS AT YEOVILTON

ALTHOUGH the Royal Navy put on its usual excellent show at the Yeovilton Air Day on Saturday, July 3, the obvious interest to the enthusiast was the visit of the US Navy aerobatic team, the Blue Angels.

Like the USAF's Thunderbirds mentioned last month, the US Navy team are all full-timers. Their aircraft, the F-11A Tiger, is by modern standards out-of-date as a front-line fighter, but the Blue Angels keep these aircraft for their mount as it is, without doubt, the most suitable aircraft for the purpose.

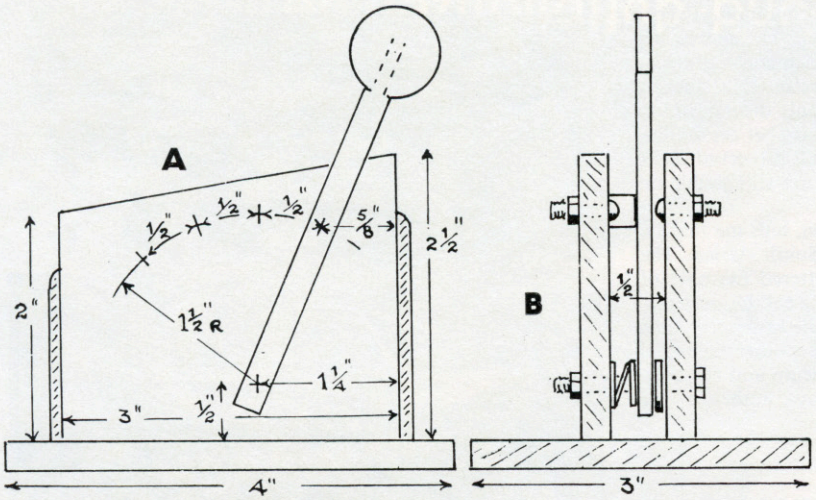
The team of six Tigers are supported by a TF-9J Cougar and a Skymaster to carry ground crew and aircraft spares. Each aircraft is painted in the distinctive Blue Angels colour scheme of dark blue and yellow, the only exception being the Skymaster, which has a white top to the fuselage. A large yellow number



Top to bottom: *The Douglas TA-4E Skyhawk Trainer which made its first flight on June 30 from Palmdale, Calif. The US Navy has ordered 35 of these advanced trainers. Messerschmitt Bf 109G preserved by Mr Sid Marshall in Australia. The aircraft is in its original paint scheme and has not been flown since overhaul in 1943. A rather battered example of a Bf 109E at the Johannesburg War Museum, South Africa.*

appears on the tail of each 'plane, 1-6 for the Tigers, 7 for the Cougar and 8 for the Skymaster. It is apparently common practice for the Blue Angels to decorate their aircraft with the national flag of the country they are visiting when they are lined up before a show. The Union Jack appeared on each aircraft, as shown in my photograph of the Cougar, but I thought things were going just a little too far when I saw the 17 feet high flagpole which sprouted from the rear of the Skymaster's cockpit!

The Blue Angels demonstration of aerobatics was impressive. They were out of sight of the crowd for comparatively long periods, but this was made up for by the closeness of their formation. They fly, I was told, with a 36 inch separation between the wing tips and the canopies, and with the wings overlapping by 14 feet. Unfortunately, No 1 aircraft, flown by Cdr Bob Aumack, the leader of the Blue Angels, went unserviceable just after take-off during the show but, in a very quick switch with aircraft No 6, the show continued.



Wheelspin

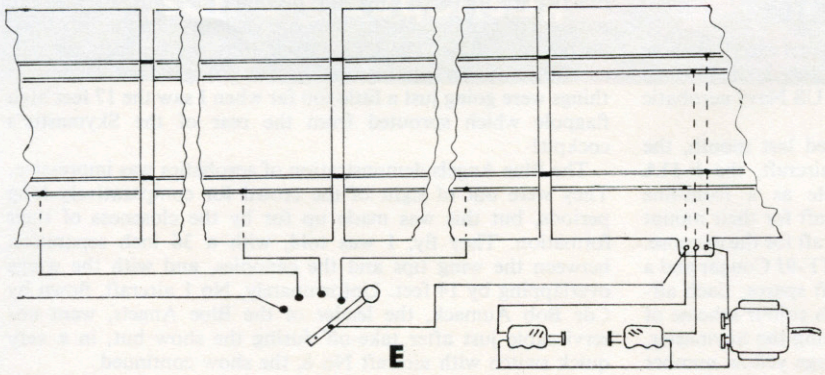
BY BERT LAMKIN

An 'electric gearbox' can work wonders

AS a change from the standard 'driving' technique on miniature slot circuits, I have been experimenting with the use of two controls—a throttle and a gear lever. Obviously, on a standard layout you cannot actually change the car's gears by remote control. So, the idea has to be developed in the 'electrics'. After some thought the following scheme was evolved.

In this design the gearbox becomes a switch box wired into sections of the track. (Incidentally, this device calls for a little more construction effort than some of the earlier ideas in Wheelspin.) The sections of track are only energised when the gear lever is moved to the appropriate position. Thus, if you forget to change, the car will stop.

There are several ways of connecting the 'gearbox', either by having equal sections of track between each contact, or by increasing or decreasing the distance for each position of the lever. For example, if you have one length of 7¼ inches between first and second positions, two lengths (14½ inches) between second and third, and three lengths (21¾ inches) between third and fourth, you would get the effect of 'changing up'. The reverse would be like changing down.



So, if you really want to go to town, you could wire several groups of sections to simulate 'down' into a corner and 'up' on leaving. If that did not keep you on your toes, you are obviously a budding world champion! Whichever system you adopt, the racing will be more exciting, as someone is bound to forget the gear lever.

Construction

Sketches A, B and C show the construction of the additional control. The sides and base are from 3 inch × ¼ inch wood, the ends are hardboard, and the gate is from 1/16 inch brass sheet. Cut the two sides to the size shown, and mark and drill the holes for the pivot, which is a 6BA bolt.

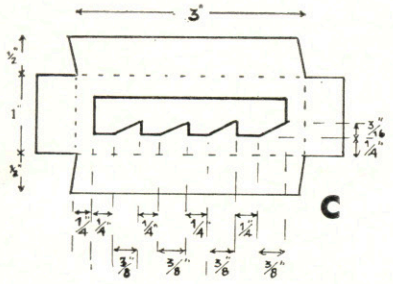
Now on one side mark and drill for the contacts; these are brass 6BA round-headed bolts, and are secured with nuts and washers on the outside face. The other side piece is fitted with a flat spring to hold the lever against the contact. This spring, shown in sketch D, is cut from brass sheet, and bent to give the required tension. You may find something in the scrap box that will do. The spring also forms the moving contact of the switchbox. It is attached to the side with 6BA bolts through the drilled ends—one of the holes will need elongating to allow for the spring's movement.

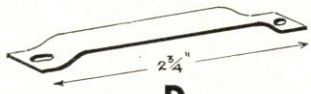
The gear lever is made from ¼ inch × ⅛ inch brass bar and is 3½ inches long. The pivot hole is drilled ¼ inch from one end, and a small knob (it could be a wooden bead) is fitted at the other. Alternatively, it should not be too difficult to fashion a knob from a piece of dowel. File the lever to a square for about half an inch. Drill the knob slightly undersize for this square, but do not fit it until the gate is in position. The gear lever can now be mounted on its pivot.

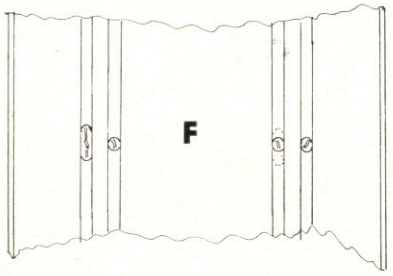
Assembly details

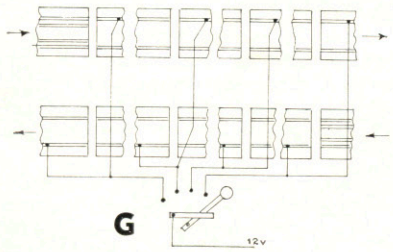
The pivot, a 1¼ inch 6BA bolt, is passed through the side piece with the contact bolts, a washer is slipped on, then the lever, then a spring washer. You may need two of these to span the ¼ inch between the lever and the other side. The second side is then slipped on and held temporarily with a washer and a nut.

The base is the next item, and is simply a piece of wood 4½ inches × 3 inches by ¼ inch or ½ inch thick. Draw two pencil lines 1⅛ inch from the long side, and ¾ inch apart. At a point on these lines one inch from each end, drill









four small holes. The side pieces can now be attached to the base by four wood screws.

Now the gate should be marked out and cut from the sheet brass. Drill and file the actual gate before cutting the overall shape, then the ends and side tabs can be bent down at right angles. Bend outside the dotted lines, and run solder into the corners to strengthen. With the sides fixed to the base, the gate can be fitted. Incidentally, if you ease off the top outer edges with glass paper, the gate will be a better fit. Now mount the knob on the gear lever, but before proceeding satisfy yourself that the lever travels through the gate smoothly, and makes contact with each bolt head in the four positions. Finally, the hardboard ends can be attached, either with adhesive, or with panel pins.

Diagram E shows how the 'gearbox' is connected with the track. In this case it is introduced immediately after the start line, and energises each section in turn. Each piece of Airfix track connected to the 'box' will need a small modification. This consists of soldering a wire on to two of the conductor rails and removing the normal connecting tags. The diagram shows you the conductors concerned.

To facilitate the soldering of the leads on each section, some of the plastic must be cut away. Sketch F indicates how this is achieved by drilling either side of the central fixing. Make sure the soldering iron is hot and attach the wire quickly—excessive heat distorts most plastics. A small notch filed in the side flange of each section will keep it level over the leads. The length of these will depend, of course, on where you site your controls.

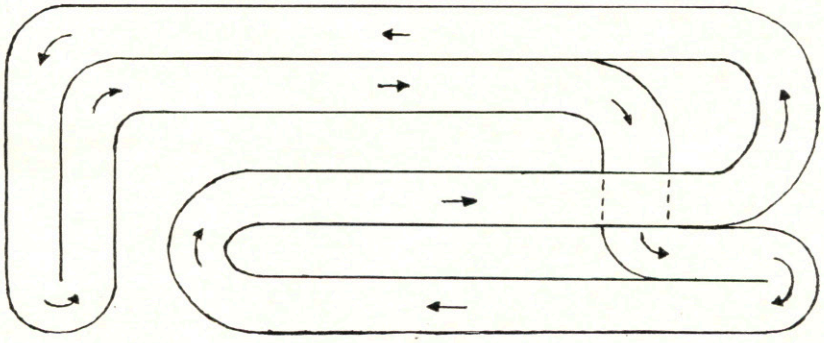
All the foregoing deals with one gearbox—you will need one for each lane of your circuit. I think you will find the effort involved is well worthwhile, and slick changes will become a part of your driving technique. A development of the idea of changing 'up' and 'down' is shown in diagram G, but this could only apply to a reasonably large circuit.

SLOT CENTRE

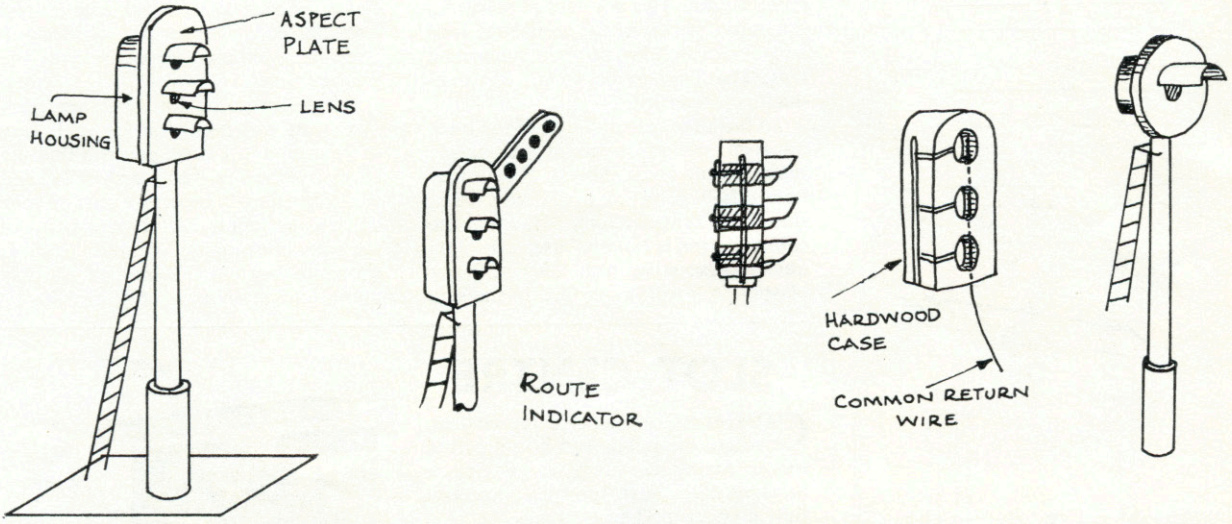
COMMERCIAL slot racing centres, where the public can go miniature motor racing as easily as playing a bowling alley, have sprung up successfully all over the United States. There is every indication that developments could follow a similar pattern in England, and the first coin-operated slot racing layout in this country has just been opened in the model department of Gamages, the London departmental store. It was built in close co-operation with Airfix Products Ltd.

The six-lane circuit (part of which is illustrated right) covers an area 30 feet by 12 feet and its testing shape gives a 140-foot lap length. To operate the layout, customers insert sixpence in one of the six coin-operated meters located in the control console, which energises a lane for five minutes (alternatively, 2s supplies power for 20 minutes), and away they go. You can either race your own car, or hire one for 1s extra. Spares and equipment are available from an adjacent counter.

A plan of the layout is reproduced below. After the start/finish straight, cars negotiate a fast right-hander, leading into another straight, at the end of which is an even faster left-hander before the long 'back' straight. At the end of this there is a left-hand approach preceding a tight hairpin, which is followed by a right-hand bend leading on to the fourth straight. Next comes a right-hander, after which the cars dip under a bridge, before taking a tight left-hand corner, followed quickly by a second hairpin leading on to the finishing straight. Quite a test of any driver's skill, and well worth a visit.



CONTROL CONSOLE



COLOUR LIGHT SIGNALS

Plastic Modelling

by Mike Bryant

AS I said in my article last month, colour light signalling is a subject in itself, and perhaps it is best to deal with the two types of signals consecutively because both have a lot in common when it comes to scratch building. As with ordinary signals, colour light types are available from the proprietary manufacturers at quite reasonable prices. However, the outlay to signal anything but the smallest and simplest of layouts is quite heavy, and many modellers like to build at least some of their own.

As with semaphores, colour lights are often omitted from model railways—or anyway are one of the last things to be added to a layout. I would suggest that there are probably two reasons for this: firstly, the basic principles of prototype signalling are something of a mystery to most modellers—and one is always liable to leave to the last anything which requires a fair amount of research before one can start the actual modelling!

This subject need be a mystery no longer because an excellent and quite inexpensive book has appeared from Ian Allan on the subject*. I recommend it for every modeller's essential reference bookshelf. The second reason is undoubtedly the matter of cost. As I said before, the outlay can be heavy, so I think it best to pose the question now: is it better to have non-working, but correct, signals at negligible cost, or to add fully working signals as funds become available and to put up with a very sketchily signalled layout for some considerable time?

This is a very real problem, because it must be clearly stated now that you can make at least a dozen accurate scale *dummy* colour light signals for the cost of buying one rather overscale working one. The choice you make is very much a personal one, but I suggest in many cases you could compromise by signalling your layout fully at once with dummy signals, replacing them gradually with either bought or scratch-built working signals as time and money allow.

* British Railway Signalling—Kichenside and Williams.

Once you have put aside the question of making *working* colour lights, the problem becomes a simple modelling project in which certain mass-production techniques can be used with advantage. I think plastic is really the best medium to work in, producing as it does a quicker and a stronger result than wood, card or paper. Soldered metal construction would be stronger still, but the ease of working in plastic far outweighs this advantage.

There are at least three ways of making the coloured lenses or aspects. They can be painted on, they can be cut from colour transparency, or, perhaps most effectively of all, they can be made from tiny brilliants sold in handicraft shops for making costume jewellery. The only disadvantage with this last method is that in certain lights *all* the aspects appear to be illuminated at once; it is odd, however, how seldom this happens in practice —it seems much more usual for the light to catch just one lens at any one time. For a single aspect signal I suggest that an amber brilliant is best.

The Airfix platform canopy kit is a useful source of supply for the posts. The pillars in the kit have the requisite thickening of the post towards the base, and only need the ornamental collar removed to be ideal for signal columns. Alternatively, you can use the Structo round section material, adding the thicker base of the column by wrapping layers of gumstrip round the rod. If you do this, leave an eighth of an inch of the plastic rod protruding at the bottom so that you have a plastic-to-plastic joint with the signal base—this gives a really strong fixing. If you use the canopy posts, I find it better to recess the top collar on the post to notch behind the aspect head; this strengthens what might otherwise be a weak point.

Of course, if your layout is a permanent one, you can dispense with separate signal bases and cement your posts directly into the baseboard. However, if your layout is not a fixture, or if you are using softboard as a base, you will find it better to mount each signal on a baseplate which can then be pinned or screwed to the layout. This will also allow you to make your ladders fixtures and the whole signal can be self-contained. The foot of the ladder can fit into holes in the baseplate and the top

can be bent to clip round the post, as shown in the semaphore signal detailed last month. Ladders can be metal as before, or you can cannibalise an Airfix signal gantry or water tower kit.

The aspect plate is cut from 0.03 inch plastic sheet, the lenses being drilled out before the part is cut. The lamp housing, from 0.06 inch sheet, will have to be recessed slightly behind the lenses if you are using brilliants. The top of both aspect plate and lamp housing are rounded and then cemented together. A drop of liquid cement will hold the brilliants in place. The lens hoods are difficult to produce, but I find the following method best. I cut a strip of 0.01 inch sheet, wrap it firmly round a rod of 1/16th inch diameter with Sellotape and then hold the whole thing in a pan of boiling water for about a minute. Plunging the rod into cold water will set the plastic into a tube from which I cut the hoods *while the plastic is still on the rod.*

The aspect plate will have to be filed from 0.04 inch sheet—the dummy lamp casing at the back can be a disc of plastic from a leather punch.

There is, of course, no reason why any type of colour light should not be reproduced in model form—the obvious type I have not touched on being the signal with a route indicator—an arm with white lamps jutting out from the side of the aspect. The best advice I can give is to watch the signals when you go on a train journey and sketch what you see. If you have your camera handy, the odd photograph will help with your modelling.

Many modellers will not, however, be satisfied with dummy signals, so here is my method with working ones. You have a choice of bulbs: the Hornby-Dublo type (for which you will have to solder the wire connections) or the 12 volt grain of wheat bulbs available in many model shops at about 1s 2d each (these have 6 inch leads already in place which simplify matters considerably).

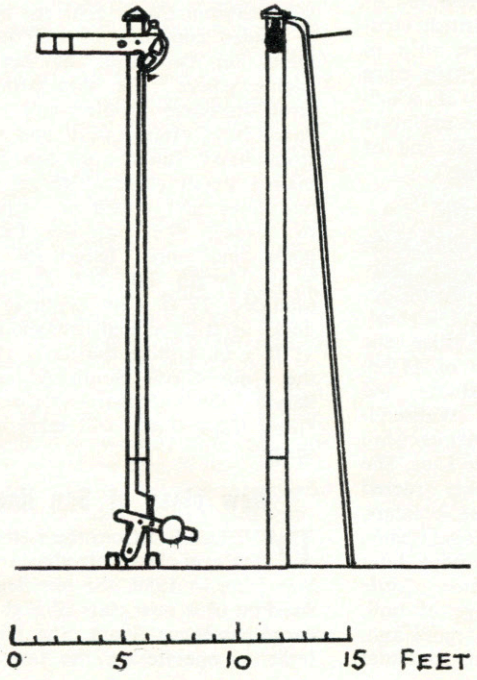
With either type of bulb, I make the lamp housing of hardwood. It prolongs the life of the bulbs if they are to run on 6 volts, but even on this reduced voltage they still get hot and wood seems more able to cope with the heat than plastic. The holes for the bulbs should be bored with a really sharp drill to prevent splitting. For Hornby-Dublo bulbs the holes should be a gentle force-fit; for the other kind of bulbs they should be just clearance. The lamp housing and the aspect plate should be glued together with Uhu.

The fine hole drilled upwards through the casing is best done with the drill in a pin vice held in the fingers. The hole must just break through into each bulb hole and contains a bare copper wire which forms the common return through the metal housing of each bulb. The positive leads should be soldered to each bulb before it is inserted. I use enamel insulated wire from an old radio coil, which radio dealers who do repairs will usually let you have for a few pence. For neatness' sake, I 'bury' the wires in saw cuts in the casing then, when all the bulbs are installed and *working*, I glue a strip of thin plastic or card round the outer casing to neaten everything up. The wires are taken down the rear of the post if you are using a solid one, or inside if your post is thin brass tube or rolled gumstrip.

The leads are carefully bent at right angles and the bulbs slid into place; if the leads are held into their slots with a spot of glue, no other fixing for the bulbs will be necessary.

So much for the working part of the colour light. The actual heads can, of course, be mounted in an almost infinite number of ways. The best way to get authenticity on your own layout is to observe full-size railways and reproduce them in model form. Airfix produce a neat and useful signal gantry which can be fitted with correct working signal heads.

This drawing (full size for TT3) was inadvertently omitted from last month's article, which dealt with semaphore signalling.



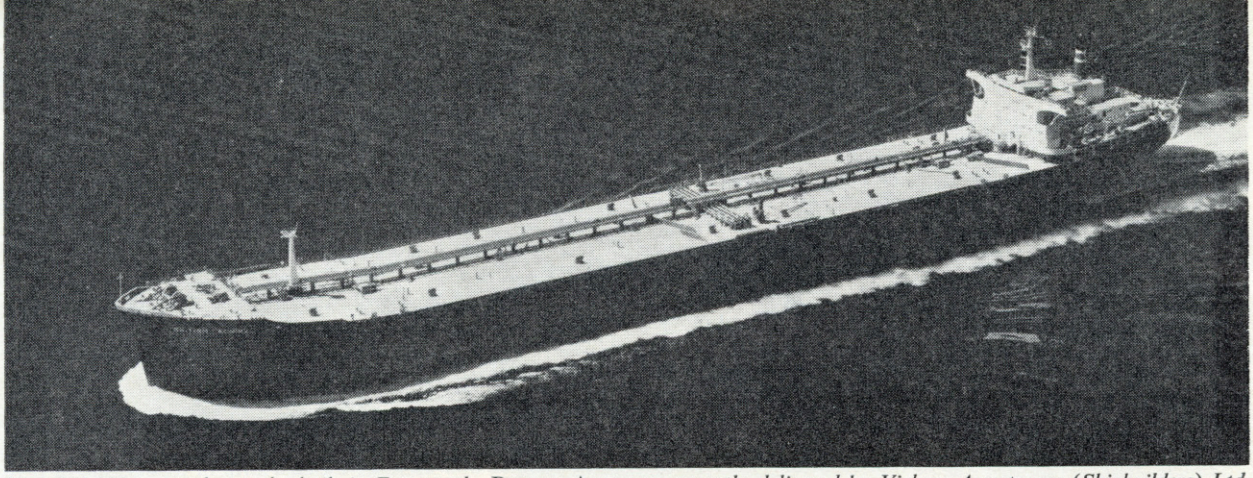
ARE YOU A KIT CONVERTER?

We have many letters from readers requesting back copies of AIRFIX MAGAZINE containing conversion articles. Back copies of many issues are still available for the benefit of readers who may have missed or mislaid earlier editions. For example, here are some of the practical articles which have appeared in recent issues.

1964: August—Converting Airfix Hunter and HMS *Hotspur* kits. **September**—Motorising the Airfix Saddle Tank. **October**—Converting the Airfix Ju 88. **November**—Conversions with the Airfix Centurion. **December**—Carrier conversions and Catalina Profile. **1965: February**—P-36A conversion with the Airfix Kittyhawk. **April**—Making Japanese Infantry equipment and converting the Airfix Boston IV into an A-20G. **May**—Converting the Airfix Sherman into a Priest. **June**—Building a Hector from the Airfix Hawker Hart. **July**—Motorising the Airfix *City of Truro*. **August**—Converting the Airfix Beaufighter.

Would readers please note that the following is a **revised** *list of those issues that are now out of print: all* 1960 *editions; February, May and June, 1961; September, October and November,* 1963; *February, March, April, May, June and July, 1964; January and March, 1965.*

Back copies cost 1s 6d each (including postage) for all issues up to and including August, 1963. From September, 1963, onwards, the cost is 2s per issue, post paid. Please address all requests for back copies, together with your remittance, to our circulation department at SURRIDGE, DAWSON (PRODUCTIONS) LTD, 136/142 NEW KENT ROAD, LONDON SE1.



First 100,000-ton tanker to be built in Europe, the BRITISH ADMIRAL, *recently delivered by Vickers-Armstrongs (Shipbuilders) Ltd to the BP Tanker Co Ltd.*

SHIPPING NOTES

by A. J. Day

I CAN well remember the time, not so many years ago, when mention of even a 30,000-ton tanker brought forth derisory remarks in some shipping circles, remarks intended to convey that such vessels might look all right on the drawing board but once in a heavy sea would almost certainly 'break their backs'. Well, no backs seem to have been broken and 100,000-tonners are in service, 160,000-tonners are on order and there is now talk of 200,000-tonners.

Japan has built most of the giants, but a few weeks ago Britain came well into the picture with the delivery of the first 100,000-ton tanker to be built in Europe, the *British Admiral,* which was constructed by Vickers - Armstrongs (Shipbuilders) Ltd, at Barrow-in-Furness, for the BP Tanker Co Ltd, London. Her launching, which took place in March of this year, with the naming ceremony performed by HM the Queen, commemorated the 50th anniversary of the British Petroleum Company. The keel had been laid in December, 1962.

The *British Admiral* is 917 ft 6 in long, 875 ft bp, 128 ft in breadth moulded, has a deadweight of 103,490 tons, a gross tonnage of about 63,000 and a service speed loaded of some 15½ knots. She is propelled by single-screw, double-reduction-gear steam turbines of Pametrada design.

One can but echo the words of Her Majesty who, when speaking at the launch, described ships and oil as two of the most powerful sinews of our economy and continued: 'As we saw *British Admiral* launched I think we all felt a sense of pride in the achievement she represents for British shipbuilding and British commerce. She is the heaviest ship to have been launched in Britain since the war and is a vessel of which Vickers-Armstrongs and the engineers and shipbuilders of Barrow and of Britain may be truly proud.'

'Southampton Castle'

ANOTHER vessel of which the builders and owners may be truly proud is the *Southampton Castle,* reputed to be the world's highest-powered and fastest cargo liner. She is a twin-screw motorship of 11,200 tons dw, built by Swan, Hunter and Wigham Richardson Ltd, Wallsend-on-Tyne, for the South Africa Mail Service of the Union-Castle Line. She is the first of two sister-ships ordered for the service from these builders. The second, the *Good Hope Castle,* is expected to go into service later this year. The *Southampton Castle* is designed for the carriage of both general and refrigerated cargoes and, anticipating the growth of container traffic, provision has also been made for up to 66 20-ton containers.

The main claim to fame of this ship, however, is undoubtedly her engine-room where most of the personnel are working a 'nine-to-five' day, enabling the watch to be maintained at sea by only one senior engineer officer assisted by a junior engineer. Control of the two main Sulzer engines is centred in an air-conditioned control-room, which monitors not only the operation of the equipment, but also automatically warns of any emergency action that might be required. Engineers taking over watch go through a check list somewhat similar to that employed in an aircraft prior to take-off.

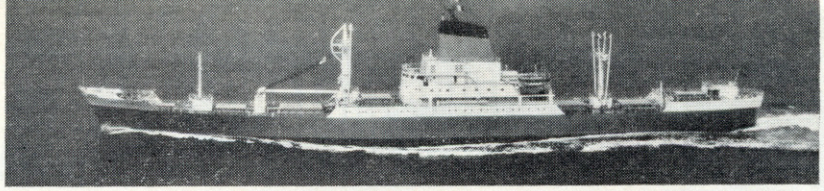
I understand that on trials the *Southampton Castle* achieved a speed in loaded condition of well over 25 knots on two-thirds of her total engine power. The ship presents a most attractive profile, with a well-flared bow, cruiser stern and a great streamlined funnel on top of the main superstructure which set off her fine lines and create an impression of power. She has the following main dimensions: length oa, 592 ft 9 in; length bp, 545 ft; breadth moulded, 77 ft 3 in; depth to upper deck, 46 ft 2 in; and draught loaded, 31 ft 1 in. Unlike the other ships of the Union-Castle South Africa Mail Service, the *Southampton Castle* and *Good Hope Castle* will carry no passengers.

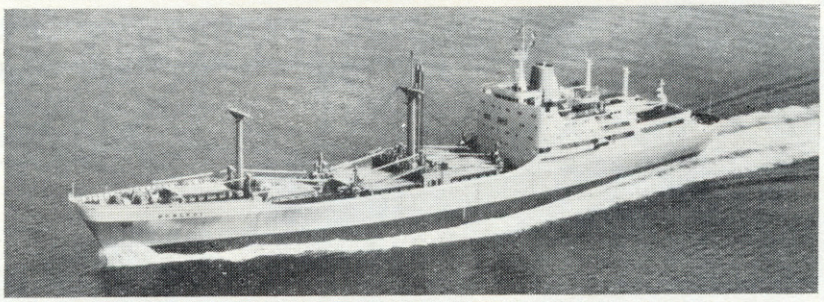
New class of Ben liner

DEVELOPED from the well-known *Benloyal*-class, introduced by the Ben Line in 1959, the mv *Benledi* is the first of a new class of high-speed, cargo-passenger liners. She has been built to operate on the fast service

between the main United Kingdom and Continental ports and Singapore, Hong Kong and Japan, at a service speed of 21 knots. Her distinguishing features include a bulbous bow which, with a new and improved hull design, is expected to effect considerable savings in fuel, despite the fact that the *Benledi* is the most powerful vessel ever ordered by the Ben Line.

Built by Charles Connell and Co (Shipbuilders) Ltd, Scotstoun, *Benledi* is powered by a nine-cylinder Barclay Curle Sulzer RD 90 single-acting, two stroke, direct-reversing diesel engine, developing 20,700 bhp at 119 rpm. The vessel is of the closed shelter deck type, with a long forecastle and long poop, cruiser stern and raked rounded stem. She has five cargo holds, four forward of the machinery space and superstructure, and one aft. The *Benledi* is remarkably well-equipped with cargo-handling gear. In addition to her derricks and cranes, she is fitted with a 2½-ton capacity Carron cargo transporter which operates on rails through ship-side doors.





Top to bottom: *The Union-Castle Line's new* SOUTHAMPTON CASTLE, *reputed to be the world's highest-powered and fastest cargo liner. First of a new class of Ben liner—the* BENLEDI, *a 21-knot vessel for the Ben Line's Far East service. Largest and fastest vessel to join the Royal Fleet Auxiliary Service, the new Fleet replenishment tanker,* RFA OLYNTHUS.

Royal Fleet Auxiliary Service

THE largest and fastest vessel to join the Royal Fleet Auxiliary Service is the new replenishment tanker, RFA *Olynthus*. The second RFA vessel to carry this name, she was designed and built by Hawthorn Leslie (Shipbuilders) Ltd, at their Hebburn-on-Tyne yard to meet the requirements of the Ministry of Defence. With a length of 648 ft and a deadweight of 22,000 tons, the tanker has sophisticated machinery systems equipped with modern forms of automatic and remote control. All manoeuvring is under direct control from the bridge and there is centralised remote control of the cargo-handling gear. An automatic data logging system is installed in the main machinery control rooms.

A feature of the ship is the helicopter landing platform aft, which will enable helicopters carried by other ships to land on the tanker to collect solid stores and oil in drums for transfer to their parent ships. Great strides have been made during recent years in refuelling at sea; the *Olynthus* is capable of providing warships with fuels and lubricants by transferring them while steaming at speed.

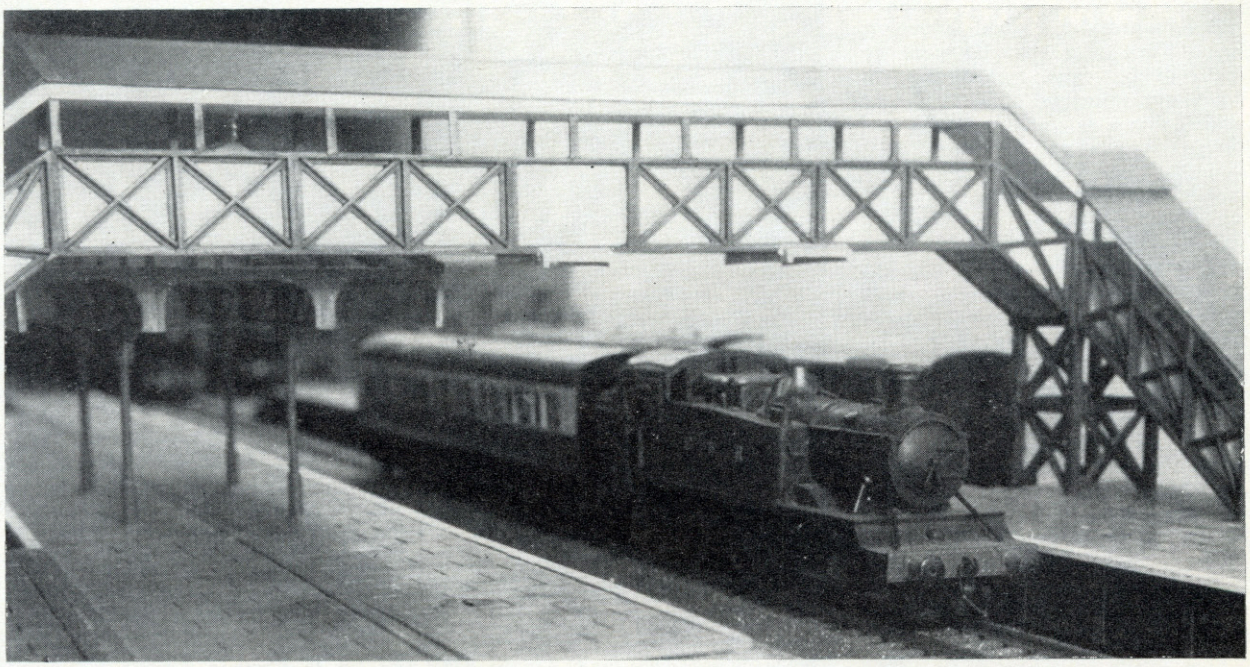
The ships of the Royal Fleet Auxiliary Service, although working in close liaison with the Royal Navy, have always been manned by officers and ratings of the Merchant Navy who sail under the Blue Ensign. At present 900 officers and more than 2,000 ratings are sailing in RFA vessels. From eight ships at the outbreak of the First World War, the Service today comprises some 40 specially-equipped vessels of up to 22,000 tons dw, including fast replenishment vessels, stores support ships and fast cargo vessels. Under the approved new construction programme, work is already in hand or about to start on new ships of each type for the Service.

The first RFA *Olynthus* was also a tanker. She was built in 1918 and one of the most memorable episodes in her long life was her support of HM Ships *Ajax, Exeter* and *Achilles* during the Battle of the River Plate. A 1:600 scale model of *HMS Ajax* is the latest addition to the Airfix famous warship series. A sister-ship to the new *Olynthus,* the *Olna,* was launched by Hawthorn Leslie during the last week of July. A third such vessel, the *Oleander,* is due to be completed during the next few months.

New RN survey ship

A VESSEL with a propeller in her bows, a helicopter flight deck and hangar, a garage and two scientific laboratories was recently launched for the Royal Navy. She is HMS *Hydra,* the last of three new survey ships. She will be able to drill sample cores from the sea bed at 33,000 ft, and cable on another of her winches will plumb the deepest sea chasms known to oceanographers. In addition to this deep-water work, the ship will be capable of surveying shallow coastal areas. Hence the garage—to house a Land-Rover and trailer for use by scientists whose work will take them ashore. Other hydrographic operations will be aided by a Wasp helicopter, and the bow propeller will give great powers of manoeuvre.

The *Hydra* has an overall length of 260 ft, and a displacement of 2,800 tons. With a range of 12,000 miles and commanding a leisurely 12 knots, she will have a complement of 117 officers, scientists and ratings. She has been built by Yarrow and Co Ltd, with a hull specially strengthened for navigation in ice. There have been six earlier *Hydras* in British naval history; the first was launched into the Thames in 1778.



Completed Airfix footbridge, with an increased span and other modifications as described in the text.

BASIC RAILWAY MODELLING—by Norman Simmons

THE STATION FOOTBRIDGE

Ninth of a regular bi-monthly series catering specially for newcomers to model railways

AT some stations, access to platforms is by subway, and there are even a few places where passengers are allowed to walk across the line—after looking both ways of course. But at the vast majority of small to medium-sized stations the safety of passengers when crossing the line is assured by the provision of a footbridge.

In looking through some station photographs while doing research for these articles, I was struck by the tremendous variety in the different designs of footbridges. I was also impressed by the degree of prominence that the footbridge has in the railway scene, and the necessity for getting this part of your layout to look just right.

As with most Airfix kits, the footbridge is extremely adaptable and, whatever style of footbridge you need to create, I recommend using this kit as a basis. The standard kit provides a maximum $8\frac{1}{2}$ inch clear span, and it can be assembled with the lower stairs in line or at right-angles to the track.

The height of the Airfix footbridge is sufficient to clear OO gauge track when mounted at baseboard level. When used as a station footbridge mounted on the platforms it is necessary to reduce its height. This can be done either by shortening the two main piers and lower stairways or, as I have done, by cutting out one of the two panels from each of the sloping sides of the centre section and reducing the height of the upper stairways—cutting the upper stairways in half, in fact.

In order to fit my own particular location I also needed to increase the span. This I found easy to do with the aid of some additional parts from a second kit. I found that side panels and floor obtained from the second kit would provide enough material to increase the span to 12 inches if required. In the model illustrated this month, which has a 10 inch span, I have combined two pairs of open girder panels cut from upper side parts, cemented either side of one of the 'solid' centre panels. A lot of cutting and cementing is needed but it's easily accomplished with the aid of a small saw, such as the Junior Eclipse.

Another feature of most station footbridges is that the sides are, more often than not, filled in. On several Southern Region stations I know, with steelwork construction similar to the Airfix kit, the 'filling in' is done with wooden panelling mounted behind the bridge framework. These panels can easily be cut from thin plastic card cemented behind the open framework sides. This should be done before assembly of the kit and, very important, before painting, since invariably the panels are painted a different colour to the

framework. On SR stations I have noted, the panelling is painted cream and the framework green.

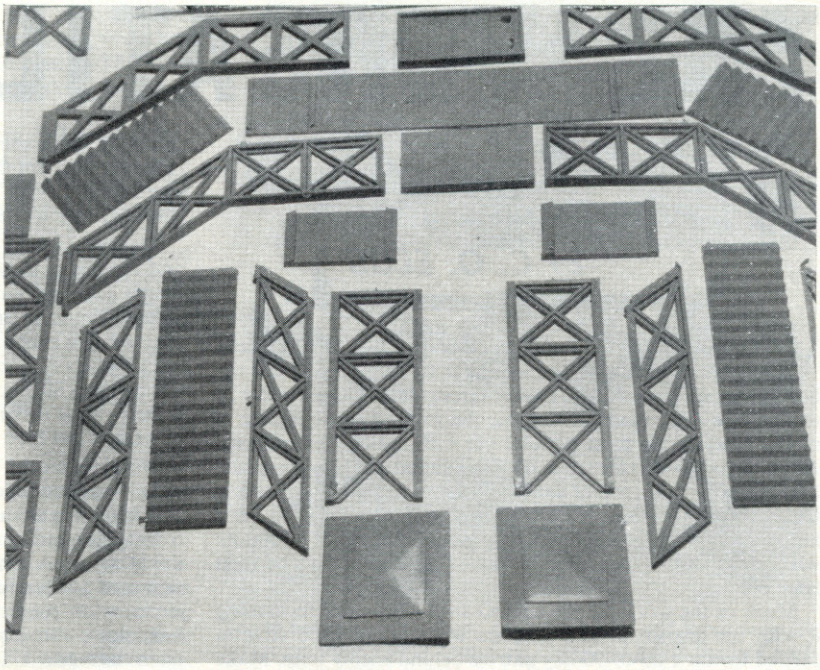
Another type of footbridge, particularly common on the Western Region, has solid 'plate girder' type sides without any apparent open steel framework. These can be represented simply by cementing panels cut from thin plastic card to the outside of the Airfix side pieces. Pre-cast concrete footbridges are also very common and can similarly be represented by cementing plastic card panels to both sides of the Airfix side pieces.

Many station footbridges have a roof, awning or canopy similar to the one I have modelled, and which is illustrated on these pages. So prominent and so common are these canopies that they cannot be ignored if realism is aimed at. Very often it is quite a simple structure with nothing more than a corrugated iron roof mounted on a light open-sided steel framework without any window glazing. Fitting such a canopy to the Airfix kit is easily enough done, and I hope readers will think it well worth the extra effort.

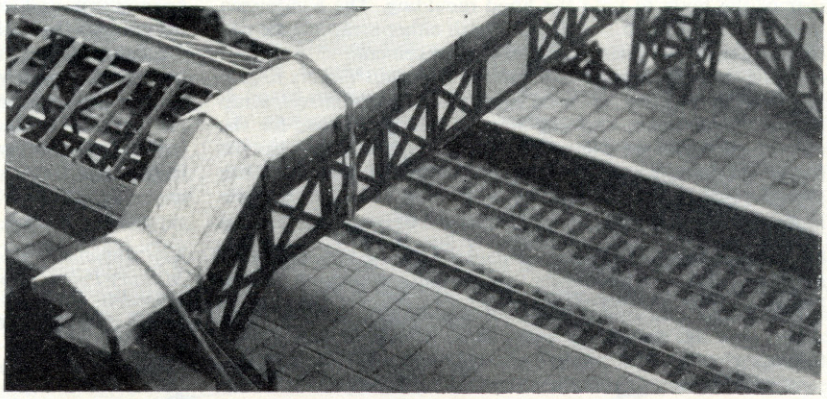
I used some glazing bars from an Airfix platform canopy kit for the framework, although any material approximately 1/16th or 1/12th inch square would do. Small pieces 3/8th inch long and spaced 1 inch apart were cemented vertically to the tops of the sides, making sure that they were truly upright and in line with each other. The base for the sloping centre span roof was cut from 3/8th inch thick balsa sheet, slightly more than one inch wide and planed to shape. Careful cutting was required to get the step down on each of the upper stairways.

I found it best to make a scale drawing of the canopy first to get the correct angles for cutting the wood. It also helped to cement the centre section first and, when firmly set, cut the upper stairway and landing pieces to fit. The roof was covered with thin plastic card, which was cut wide enough to slightly overlap the sides. Thin plastic card was also used for the flat roofs over the lower stairways. Many variations of these methods and materials can, of course, be used to cover individual requirements.

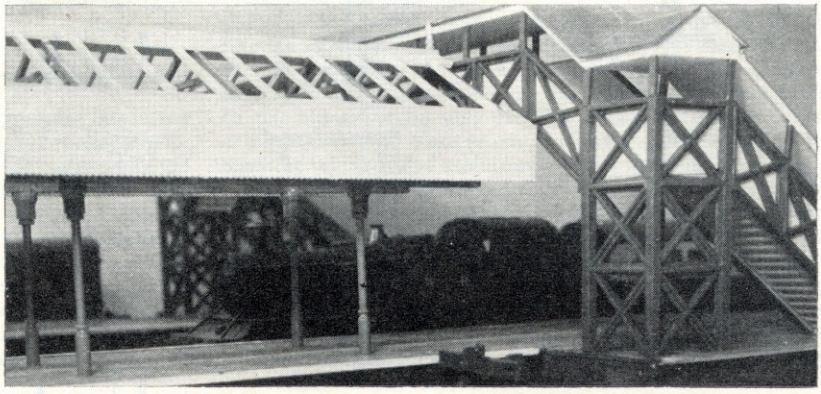
Modifying the Airfix footbridge by fitting a canopy such as this is only one example of many simple ways in which you can bring extra realism and individuality into a model railway, making it something much more than just a collection of proprietary and kit-built models.



Above: *Contents of the Airfix footbridge kit.* **Below:** *Bridge under construction, showing the balsa wood roof (before covering with plastic card) and the canopy supports cemented to the lower stairways. Rubber bands hold part of the roof in place while the cement dries.*



Below: *Another view of the completed footbridge, showing its position adjacent to the platform canopy.*



THE VERSATILE JEEP

Useful adaptations of the Airfix model

Military modelling
by C. O. ELLIS

WITHIN days of the appearance of the Jeep in the Airfix Buffalo kit, readers were writing in to ask how to make the heavily-armed Long Range Desert Group Jeep. Others wrote in to say how they made it, leaving the impression that such a model must be the most popular yet with military enthusiasts. As an introduction to a series of Jeep adaptations, therefore, the LRDG Jeep comes top of the list. All you need to start with is the Buffalo kit, from which the Jeep components have been abstracted. Don't worry about the accumulation of Buffaloes which result from these conversions—they can always be used later on.

Much of the work for the LRDG Jeep consists of festooning it with the armament and supplies which these little vehicles carried for their up-to-90-day patrols behind enemy lines. Make up the basic model in accordance with the Airfix instructions, leaving off the windscreen and the folded hood. Also cut or file off the six small supports which are moulded on the sides and rear of the body to hold the hood moulding. The windscreen locating holes should be 'plugged' with either scrap plastic rod or, more easily, with tiny blobs of styrene cement.

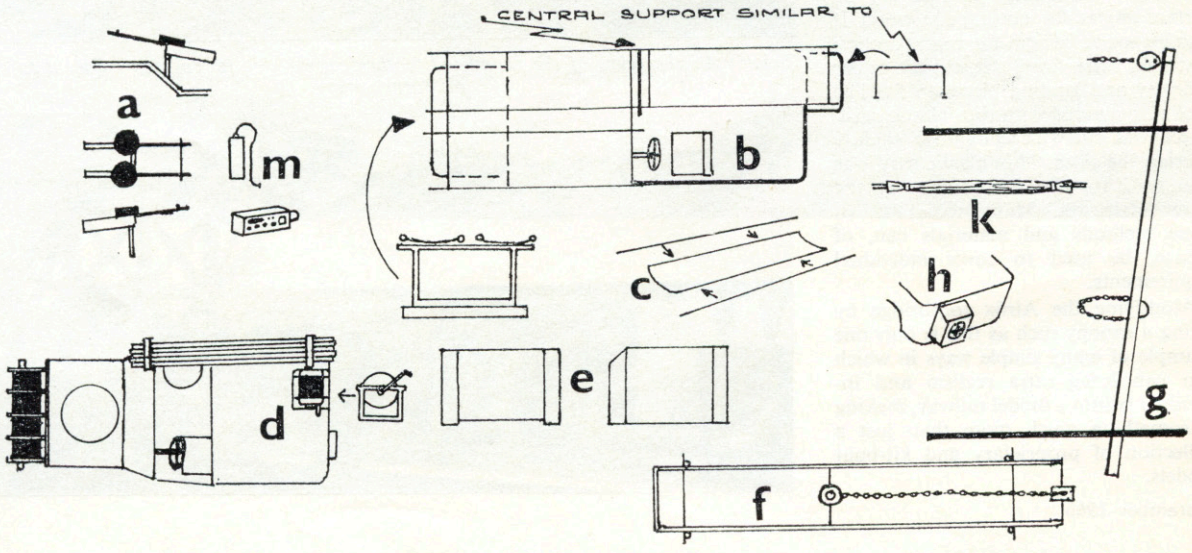
While these are drying, start making up a twin Vickers K gun, as shown in drawing A. I used small pins for the barrels, scrap plastic for the butts, and tiny 3mm punchings of card for the magazines. Note that a cross-bar (for the sight) goes across the top of the barrels at the muzzle end, while another cross-bar joins the two barrels beneath the magazines. These can both be made of wire. Now find either a thicker pin or length of wire and cement it (with something like Uhu) to the centre of the lower cross bar to form the pedestal. Then put the whole assembly to one side to dry. A single Vickers K gun is also required, and this is shown, too, in drawing A.

Meanwhile, take one of the .5 in machine guns from the kit and cement it to the bonnet immediately in front of the passenger seat and 1 mm from the rear edge of the bonnet. It is actually better to drill a small hole in the bonnet at this point so that the gun support will grip the bonnet top more firmly. The twin Vickers K is mounted on the centre of the rear seat, also in a suitably drilled hole. The single Vickers K is for the use of the driver—while driving one-handed if necessary—and is mounted in a small slot filed half way up the left-hand mudguard.

With the model now fully armed it can be loaded with the remaining equipment necessary for a long sojourn behind hostile lines in an unfriendly desert. First of all, fit a condenser in front of the radiator grille, made from a 5 mm length of cylindrical sprue. A length of wire is fitted to the top of this—to represent rubber tubing—and is led beneath the radiator. Put jerricans on the bonnet, taking two from the ambulance and breakdown conversions described later. The ammunition boxes from the 6 pdr A/T gun kit can also be cut down in length and used to represent jerricans. I made half-a-dozen in this way. A radio set, fashioned from scrap plastic or cut from the back of a combat group signaller, is fitted to the wheel cover behind the driver's seat, and jerricans or ammunition boxes fill all remaining space in the back of the vehicle. Ration boxes are carried on the front bumper, between the front seats, and on the back between the spare wheel and the jerrican. I cut these boxes from scrap balsa, and used a piece of nylon stocking as a camouflage net tucked in behind the twin Vickers mounting.

Finally, cut a couple of rifles and three or four haversacks from Airfix 8th Army figures, and cement these in any available space as the crew's personal equipment. I used the driver supplied in the kit, together with suitably modified Arab and

Key to drawings: *A—Single and double Vickers K mountings. B—Jeep Ambulance layout. C—Make stretchers this way. D—Jeep Line Layer layout. E—Top view (on left) and rear view of lockers for Military Police Jeep. F—Jib layout for Breakdown Jeep. G—Side view of jib (this is drawn sideways on page). All plan views full-size for models. H—Optional first aid locker for Ambulance Jeep. K—Folded stretcher. M—Condenser (full-size) and radio detail.*



civilian figures to represent the crew. These were cut to fit—the latter seated on top of the jerricans—and the clothes were then painted light khaki to represent drill shirts and slacks. The Arab head-dress was characteristic of the unofficial dress modifications adopted by LRDG crews.

Early LRDG Jeeps operating in the Western Desert before the .5 in Browning became available were fitted in lieu with another twin Vickers mounting on the bonnet. Colour of the desert vehicles was usually sand, with no markings at all, and a patrol would consist of a troop of four vehicles. There is plenty of variation in stowage so that you could, if preferred, put the spare wheel on the bonnet and arrange the jerricans more or less how you wish. From the Long Range Desert Group grew the Special Air Service Regt, which carried on the long-range intrusion tradition in Italy and NW Europe. Jeeps in these theatres were equipped in much the same way as the desert vehicles, though they would be painted olive drab or green.

AMBULANCE ROLE

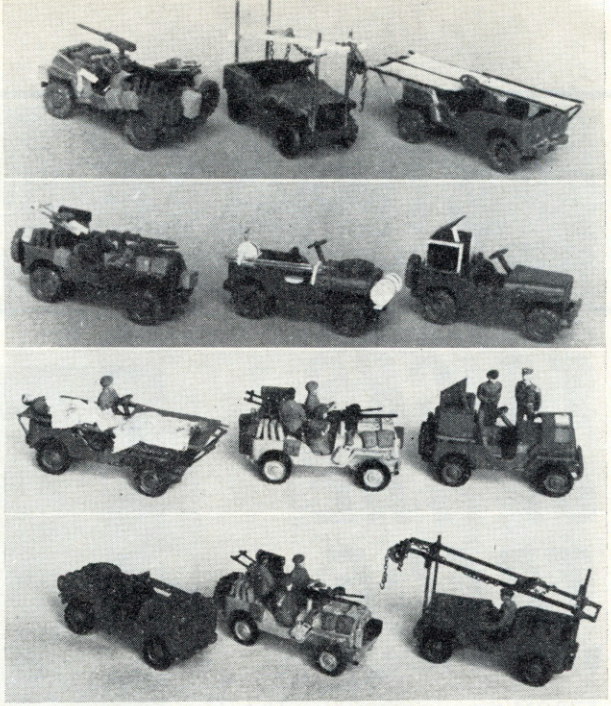
An equally important part in World War 2 was played by the Ambulance Jeeps which were used extensively for casualty evacuation in front line areas. Kits of parts were supplied to convert the vehicle for this role, and one such arrangement is shown in drawing B. It can be seen that a forward extension bracket is required, together with stays which support the extension from a strengthened front bumper. Two stretchers were carried on the bonnet and one other alongside the driver. These are best made as shown in C, since the stretchers supplied in the Airfix soldier sets are of different dimensions and cannot be used. Basically, all that is required are two pins or lengths of wire and a piece of paper curved slightly as shown. The windscreen is cemented in the lowered position and supports the inner end of the stretchers on the bonnet. The third stretcher is supported by the top of the passenger seat (suitably cut down in height) and projects out over the back of the Jeep supported by another bracket also shown at C.

I found it best to cement the stretchers permanently in place, though they were, of course, removable on the real vehicle. Wounded soldiers can be adapted from any suitable figures and blankets are effectively made from tissue paper painted grey. The jerrican is omitted and the spare wheel is cemented to the left in its place. This was sometimes omitted as well, being replaced by a small locker designed to carry medical supplies. Very often a Red Cross flag was stuck in some convenient position, though this was by no means a universal fitting.

While on the subject of Ambulance Jeeps it would be as well to mention the Medical Officer's Jeep, which would carry spare stretchers, boxes of medical supplies and, naturally, the MO. This vehicle was fitted with a radio set on the back and the aerial of this was sometimes festooned with bandages as a means of identification.

LINE LAYING AND TRAFFIC CONTROL

Jeeps were also employed by the Royal Signals for line laying duties, and the layout of such a vehicle is shown in diagram D. Four spare cable reels are mounted on a 2 mm extension of the front bumper, with another reel in the cable holder and two more reels in the space formerly occupied by the front seat, omitted in this vehicle. I used 5 mm paper punchings for the outer faces of the cable reels, with Churchill road wheels as spindles. Hollow metal rods, used for protecting lines laid under water, etc, were carried in brackets to the right-hand side. Half a dozen long pins (28 mm) with the heads removed are suitable for these, while the bracket clamps are slices of styrene sheet. An NCO and three signallers made up the crew.

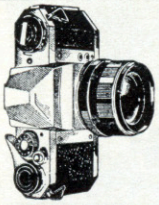


Top to bottom: *Patrol Jeep, Ambulance Jeep and Breakdown Jeep before painting. Patrol Jeep, Line Layer and RMP Traffic Control Jeep. Ambulance, Patrol and Traffic Control models as completed. The Line Layer, another view of the Patrol Jeep and the Breakdown Jeep. Note dummy counterweights in rear of the latter model.*

The Military Police made extensive use of Jeeps for patrol duties. Apart from the standard version—which usually carried a board marked MILITARY POLICE in red on white across the radiator or below the windscreen—a Traffic Control Jeep was employed for route reconnaissance and sign-posting. This carried a large wooden locker in the rear, with small lockers on each side of it for tools and paint. The arrangement can be seen in drawing E, and it only requires the structure to be made up from styrene sheet and cemented in place. On my model, I propped the lid open on the large locker, though this would normally be shut down on the road. There are some military policemen to 1:76 scale in the Merit range, and these look fine standing alongside the model. You would find this Jeep parked at a busy road junction while the MPs directed a convoy through a village. Or you might find its crew nailing a painted formation sign to a telegraph post to indicate the route for a divisional column. Little scenes like this would add authentic touches to a diorama or wargames table.

Finally this month, there is a diagram (E) for making the jib fitted to an attractive Light Breakdown version of the Jeep. This was an extemporary arrangement sometimes found in Jeeps used by REME workshops. Here four tubular posts were fitted to the chassis ends, supporting a rectangular frame which carried a couple of Westons purchases arranged in tandem. The resulting vehicle found useful employment in repair parks where it could be used for lifting out engines, carrying bodywork and so on. Four long pins or lengths of wire are used for the posts, with styrene strips as the jib framework. The vehicle on which the model is based was freshly painted in olive green and no markings of any kind were visible. On the model I used fine OO signal chain for the purchase and Churchill road wheels for the purchase blocks.

Later Military Modelling articles will include further Jeep conversions suitable for miniature Airfix armies.

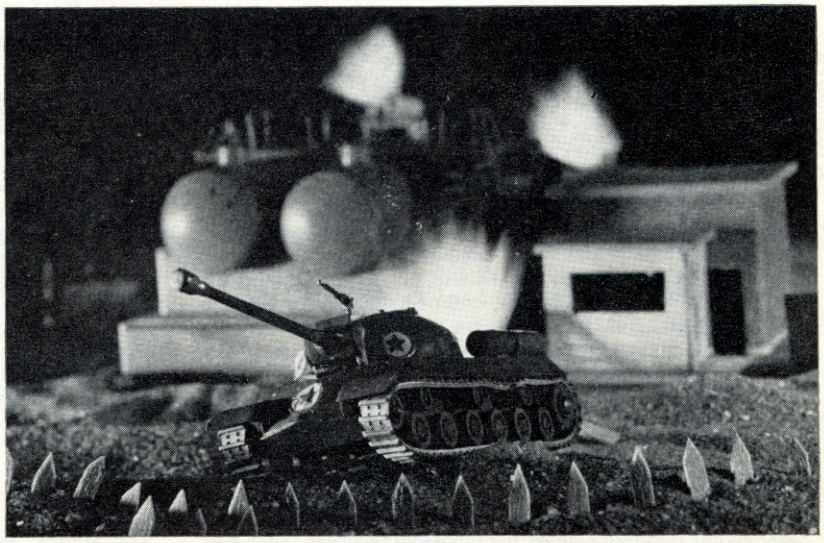


FOCUS ON MODEL PHOTOGRAPHY

Use your skill to win £100-worth of prizes—read these details of how to enter

TRICKS OF THE TRADE

By Brian Field



Realism like this is the result of a lot of time, patience and effort. The 'shells' exploding behind this Airfix Stalin were simulated by candles—blown at the time of exposure.

FROM the special articles published in the last two issues of AIRFIX Magazine, readers should now have a good idea of the basic principles of model photography. Of course, not all readers are beginners with a camera but, since I am responsible for taking the pictures that are used each month to illustrate the 'News from Airfix' pages, I hope that the comments in this article may not only be of interest to the experienced photographer, but may also give newcomers an idea of the 'professional' standards which they can ultimately aim for.

Before I get down to describing some of the techniques I employ, it may help to explain one point which has a considerable bearing on my methods. The fact that most of my pictures are used for publicity purposes means that they must not look too realistic, otherwise the subjects won't look like kits. If, in fact, the resulting *picture* looks like the real thing, then someone is apt to put forward the idea that we might just as well take a picture of the real thing!

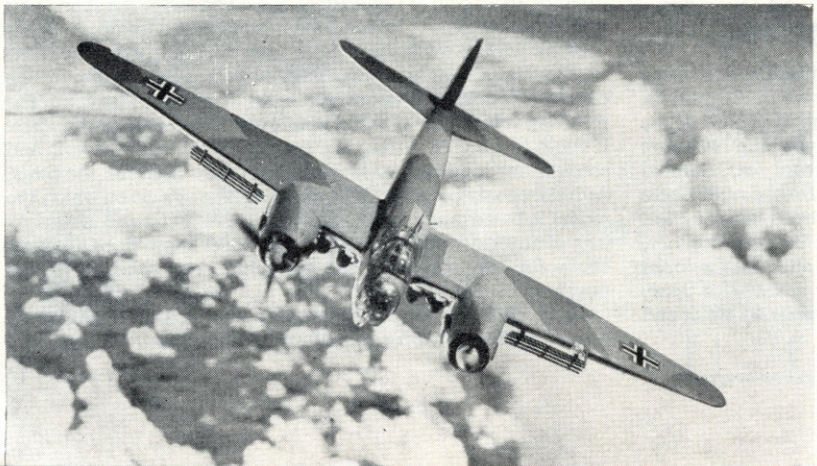
As a commercial photographer, there is also the financial aspect to be considered. Much as I would like to, I cannot spend unlimited time on taking a picture. A balance must be struck but, where I sometimes have to compromise, amateurs with plenty of free time can, of course, afford to attempt things on a more ambitious and time-consuming scale.

For my model photography I use a 5×4 Arca (Swiss) Monorail cut-film camera. It has the advantage that the larger the negative, the better the quality, and the large ground glass screen permits easier vision of the subject. An added advantage of this camera is that vertical and horizontal planes, which can become distorted with various camera positions, can be corrected by front and back adjustments.

Another essential item of equipment is a tripod. No-one who is aiming for first-class results should attempt to take pictures with a hand-held camera. A light-meter is, of course, another vital item. From experience, a professional photographer usually has a good idea of what aperture and exposure should be used under particular circumstances, but it is nevertheless an aid to getting things just right.

Some people prefer to take pictures of models against plain backgrounds,

Continued on page 21

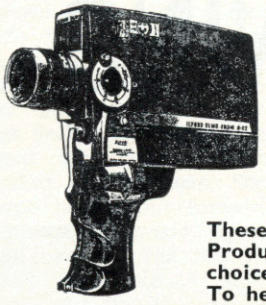


This cloud effect—one of a selection photographed from an aircraft—forms a true-to-life background for an Airfix Ju88. Note the revolving propellers.

ENTER THE *AIRFIX* magazine Model Photographic Competition

Run by *AIRFIX* magazine, with over £100-worth of prizes donated by Ilford Limited and Airfix Products Ltd

Many plastic modellers are keen photographers, and find that the two hobbies have a lot in common. To promote interest in both subjects, AIRFIX magazine is running a free model photographic competition, with the assistance of Ilford Ltd and Airfix Products Ltd. The rules of the competition are simple—and all you have to do is to submit your pictures, with a chance to win a valuable prize.



THESE ARE THE PRIZES

FIRST Ilford Elmo 8CZ ciné camera

SECOND Ilford Rangefinder 35 mm camera kit

THIRD Ilford Sportsman 125 35 mm camera

These three prizes have all been donated by Ilford Ltd. In addition, Airfix Products are providing 25 consolation prizes of Airfix kits to the recipients' choice.

To help entrants, special articles on model photography will appear in the July, August and September, 1965, issues of *AIRFIX* magazine. Subject to space being available, it is hoped that the three winning entrants will have their photographs (and possibly also their winning models) displayed in the model department of Gamages, in London. The prize presentation will also take place in London, and more details of these two events will appear later in *AIRFIX* magazine.

RULES AND CONDITIONS OF ENTRY—PLEASE READ CAREFULLY

(1) The competition is for black and white pictures only—there is no category for colour prints or transparencies.

(2) The competition is not open to professional photographers, to the employees of Ilford Ltd, Airfix Products Ltd, or to their associates or agents, or *AIRFIX* magazine.

(3) All submitted photographs must show at least one assembled Airfix model. It can be photographed either against a plain background or in a scenic setting.

(4) Photographs will be judged on their general merit and subject matter; but the entrant's age will also be taken into consideration.

(5) Prints, not negatives, should be submitted (although negatives may be required later). Photographs must not be smaller than En-print enlargements (3½ inches square, or 3½ inches by 5 inches, according to negative size), and must not be larger than 12 inches by 10 inches. Prints should be securely packed with cardboard.

(6) Entrants must ensure that negatives of their pictures can be made available at the conclusion of the competition if deemed necessary by the organisers. Actual models must not be submitted.

(7) It is a condition of entry that prize-winners agree to their pictures being used for publication and/or publicity purposes without a fee by *AIRFIX* magazine, Ilford Ltd or Airfix Products Ltd.

(8) Entries can only be returned when accompanied by a stiff-backed, stamped-addressed envelope of adequate size. No responsibility can be accepted for loss or damage to prints.

(9) Each entry must be accompanied by an official entry form taken from the July, August or September, 1965, issues of *AIRFIX* magazine, or available from your local Airfix stockist. Each entry form (below) must be accompanied by any one of the following: the official entry *coupon* published in the July, August or September, 1965, issues of *AIRFIX* magazine, *OR* an Airfix kit box top/header, *OR* an Ilford film carton.

(10) All photographs must carry the entrant's name and address, clearly marked, on the back.

(11) There is no limit to the number of prints that each individual can enter, but they must all be submitted at the same time and covered by the official entry form, plus coupon or box tops.

(12) The judges' decision will be final, and no correspondence can be entered into concerning the competition. The closing date for entries is September 6, 1965. The entries will be judged by a panel of three—H. D. J. Cole, FRPS, AIBP (Manager of Ilford Ltd's Photographic Advertising Unit at Cricklewood and President of the Royal Photographic Society), the Chief Designer for Airfix Products Ltd, and Darryl Reach (Editor of *AIRFIX* magazine).

(13) Entries submitted that are not in accordance with these rules will be disqualified.

Closing date for entries is September 6, 1965. The results will be published in the October issue of AIRFIX magazine (on sale September 22). It is also hoped to publish the three winning photographs in the October issue of AIRFIX magazine.

OFFICIAL ENTRY FORM

All entries should be addressed to:

**PHOTO COMPETITION,
AIRFIX MAGAZINE,
BRANDS HATCH CIRCUIT,
FAWKHAM,
DARTFORD, KENT.**

I enclose (in accordance with rule 9) either: Entry coupon cut from July, August or September, 1965, issue of AIRFIX magazine/Airfix kit box top or header/Ilford film carton (delete as applicable)

Name..... Age (if under 21).....

Address.....

(CAPITALS)..... NUMBER OF PRINTS ENCLOSED.....

I have read, understood and agree to abide by the rules of the *AIRFIX* magazine Model Photographic Competition. I am not a professional photographer.

SIGNED..... Date..... (S)

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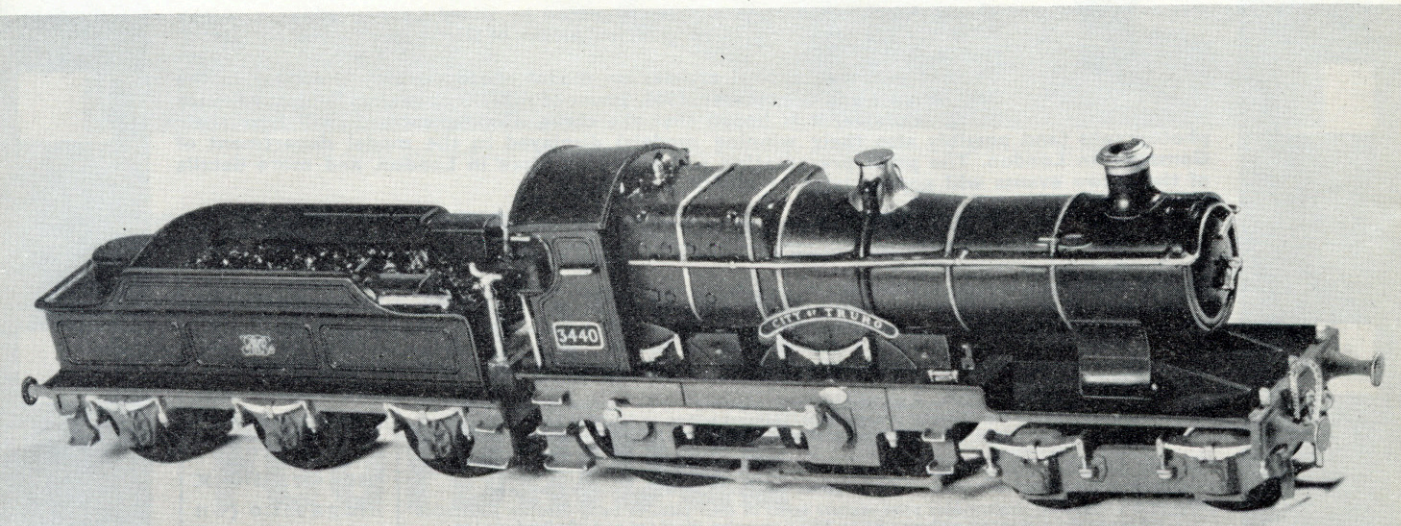

You understand the importance of detail in model making,
Ilford understand the importance of detail in photography.
That's why they make Ilford FP3—the fast,
very fine-grain film that's superb for enlargements.
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Capture all the detail and all the quality on Ilford FP3.
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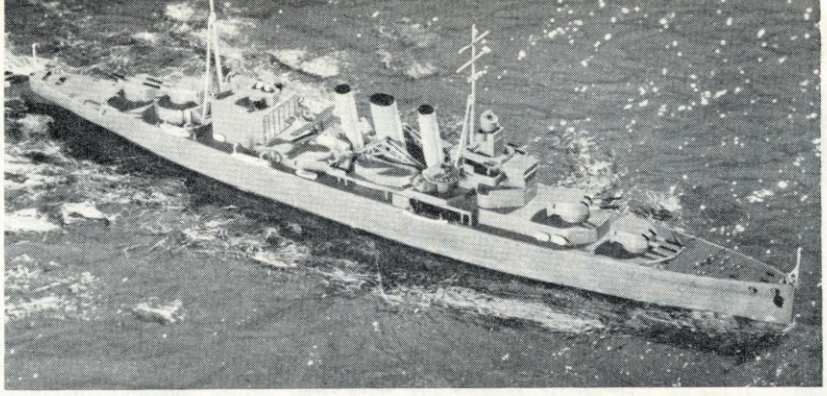


Airfix's HMS SUFFOLK *ploughs her way through 'sea' reproduced with carefully painted crinkled Cellophane.*

which is by far the simplest method. But, if you're using a blown-up photograph as a background (I use a print measuring anything from 8×10 inches to 20×30 inches), the whole set is best rigged up on a table, manoeuvring the model into a realistic position relative to the picture background. Finding suitable pictures for backgrounds can be difficult but there is always the solution of going out and taking some!

If you are against such methods, and like to use built-up model scenic backgrounds, you may still be short of ideas. In the case of military models, a visit to the Imperial War Museum and a look through their photographic library will give you some good ideas for sets. Various illustrations in books are another useful source. When choosing a background setting, remember that it should be suggestive of where and how you would see the model in real life, without the background overwhelming the model which, after all, should be the main subject of the picture.

Before you try any shots with the camera, make sure that the markings on the model are authentic, and that the transfers are securely affixed. Transfers can prove troublesome, since the heat from photographic lamps can lift them off and even distort or warp parts of the model unless care is taken.

When lighting the 'set', concentrate on the model, always remembering that any scenery is of complementary importance, just as when taking the real thing. I usually employ one spot and one or two fill-in floods, which all vary in power from 250-500 watts. Whether using a mock-up or a scenic background, the model has to be lit in relation to its background, paying particular attention that shadow directions don't clash and that the model doesn't look out of scale. Before you press the shutter, check several times in the viewfinder until you are satisfied that everything is just right.

It is important to remember that, whatever type of model you are photographing, it is necessary to try and view it as it would be seen in real life. For example, you look down on most model cars, whereas the real things are seldom seen from this view. Aircraft can be quite tricky subjects. Model airport backgrounds are difficult to mock-up, since to build a model airfield takes a lot of time. It can also be difficult to take pictures of the larger civilian airfields to use as back-drops. A common difficulty is to obtain authentic representation of moving propellers on piston-engined aircraft. The answer is to have them rotating when the shutter is pressed (not difficult if someone blows at the right time), or to confine your model pictures to jet aircraft!

Cloud effects are not easy to simulate in model form, and I invariably use photographs from a stock selection taken over the Atlantic from a Boeing 707.

Ships can be a difficult subject, mainly due to the fact that sea is not easily mocked-up. If you are able to use a photographic background, make sure that the horizon is realistically positioned, and is not too near or too high relative to the model. I have had considerable success with making 'sea' from crinkled Cellophane, using white zinc oil paint to touch-in wave crests and wakes—a useful technique for both model ships and floatplanes.

With military vehicles it is important to remember, when considering backscenes, that certain types have only appeared in certain theatres of war, so don't fall into the trap of using unauthentic backgrounds. The answer is to try and simplify your ideas. Railway engines and wagons are among the easiest of models to photograph realistically, because there are so many appropriate accessories available in model form, and the job of filling in model backgrounds is thus much simplified. Model cars can be shown 'outside' a back-drop photograph of a house, a garage, or a town traffic setting. You'll get a lot of enjoyment out of experimenting with shooting suitable background shots.

Careful planning, fine sand and a background photograph of a desert in the right proportion to give the impression of vast distance, make an attractive setting for the Airfix Wagon Train.

LAYOUT REALISM

—by Alex Bowie

Plans as a preliminary guide

A LAYOUT, like a mechanism, structure or real railway, has to be planned. This doesn't mean that the drawings or sketches used in planning should be followed literally, but simply that they should be used as the preliminary guide.

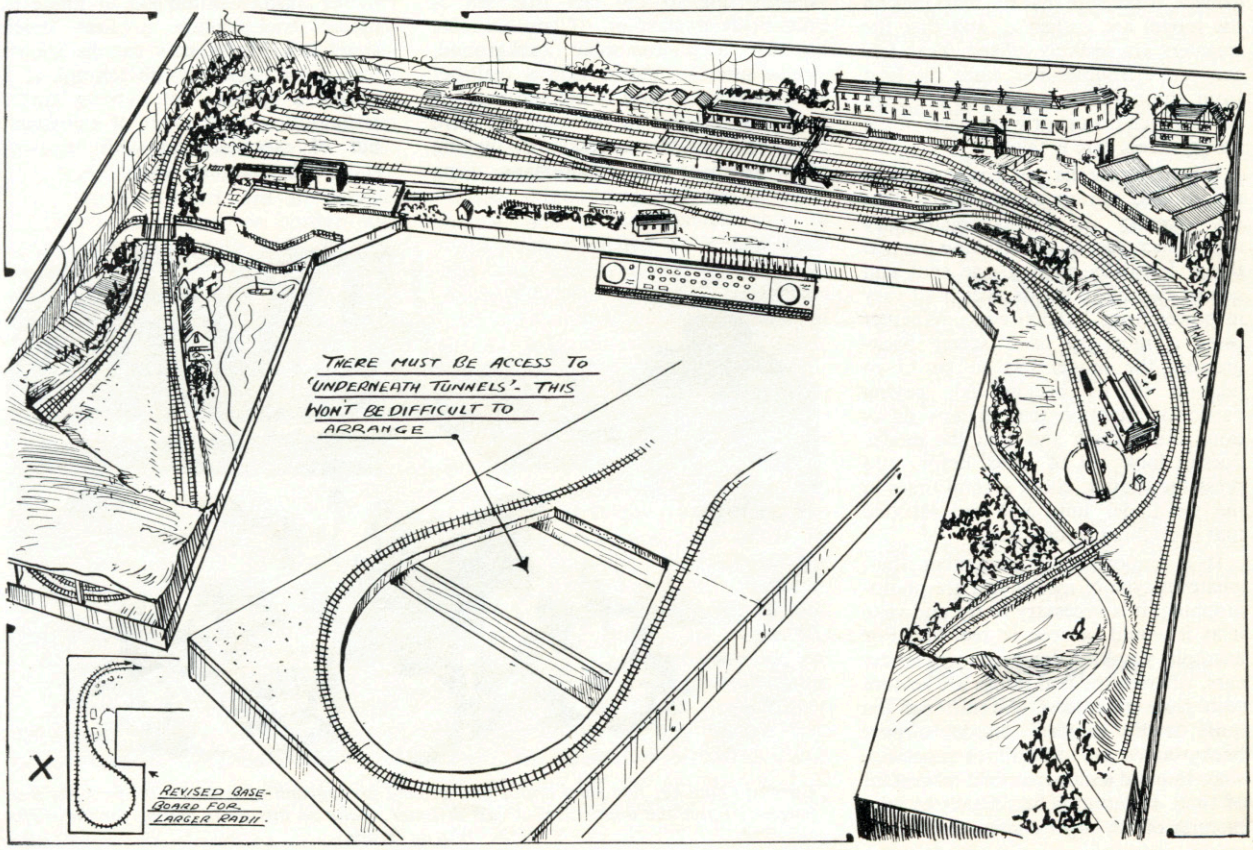
When actually building the layout, it is obviously better to have a good idea of its final form firmly in the back of your mind. But, with a few lucky exceptions, it is seldom that any plan or sketch will not need a little revision as the work proceeds. Even after some experience of sketching the layouts beforehand, I still find that a few alterations in the placing of the modelled buildings, track or landscape can often bring a real improvement.

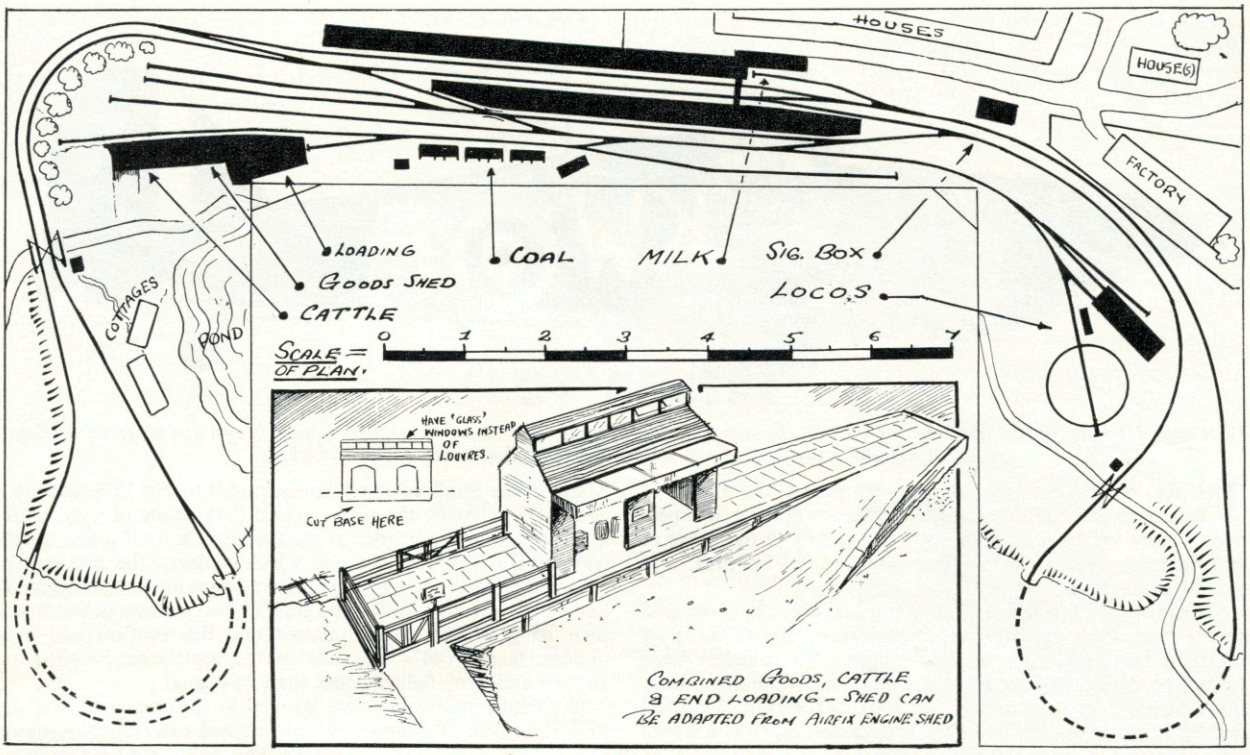
I have seen it suggested that planning isn't necessary, and such statements would at first seem to illustrate the traditional capacity for finding subjects to argue about, but I do find that some people, particularly younger fans, *genuinely* believe that planning is a waste of time, or that they can 'plan' as they go. The result is that many of these unfortunate modellers seldom finish layouts, and many others are seldom satisfied with what they have done because difficulties crop up which could have been foreseen—if the layouts had been first planned on paper.

Now I realise that not everybody is a draughtsman or an artist, and that some people are not so good at visualising a layout as others. But this isn't such a terrible handicap and, although artistic types can produce prettier pictures, that doesn't mean that the average chap cannot produce rough plans and sketches which serve their purpose.

Although both a plan and a perspective sketch is better, the plan only will do at a pinch. There is one warning, though, and that is to avoid wishful thinking. The temptation to cram more on to the paper than will fit on to a baseboard is a big one, and it is the easiest thing in the world to draw impractical spacings between track, loops or point work which are too short, or platforms too narrow, etc. These are all common mistakes, and can be avoided if, when planning, you have specimens of trackwork in front of you, plus definite measurements of the various platforms and buildings you would like to use.

This month I have sketched a type of layout which, though not completely new in all respects, is a little different. It is a U-shaped variant of a long type of breadboard layout which is becoming quite popular with some people. A feature of the normal 'long' layout is that, in-





Left: *This type of doubled back layout enables trains to go this-a-way and that-a-way without the operator leaving his controls. Plan* **(above)** *gives some idea of the size, which could be reduced slightly.*

stead of being U-shaped as sketched, it goes along one side of a room and gives in effect a return loop at each end of a main line. In the centre there is just one passing station which can be longer and more ambitious than average. Generally speaking, the long and narrow type of layout is regarded as being for the lone operator, and some are of great length. The first I encountered was situated in a loft space, and was over 30 feet long. The owner sat in the middle at a huge control board rather like the operator of a Wurlitzer organ. Thus the great advantage of this layout is that the chap who likes the main line theme can sit comfortably in front of a quite large through station, watching the trains go by (or come and go after a short stop). Many enthusiasts like this kind of operation better than the more usual two-terminus, or terminus to storage siding, layouts, and it can be a quite spectacular system.

FOR AVERAGE ROOMS

But it has the rather serious drawback that it needs a very long room indeed to be fully effective, so the revised, U-shaped version that I have sketched would be a good compromise. I have assumed a room of about 15 feet long, for the plan shown. This gives quite a length of main line.

As I've pointed out before, short radius *hidden* curves have some practical advantages, and in the case of this layout they are distinctively useful. In the first place, the short radius allows for longer straights, which I think is well known by now. The second advantage is that the very tight curves allow for narrower baseboards at the two sides of the room. This is important because wider boards make for more difficult maintenance. But there is also another advantage, not so obvious. If you look at the plan you will see that there is plenty of open floor space in front of the station. Those people who hate feeling cramped will appreciate what I mean.

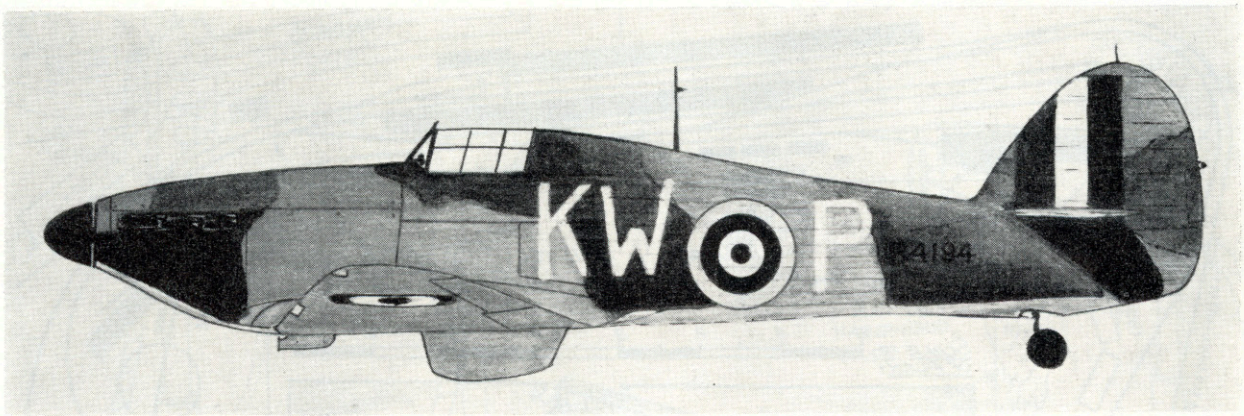
You will realise that small radius curves rule out *most* scale stock. And thus, if scale is preferred, it should be possible to increase the radius to say two foot. The two end baseboards could be wide enough to take the increased radius but could narrow down in the vicinity of the pond and the loco sheds, as shown in the small sketch.

I have sketched tunnels to hide two of the curves, and trees to hide another. As small radius curves are also short in length, it follows that they can be hidden by comparatively short tunnels. In the case of those shown, they should be at least a little longer than the longest train, otherwise you'll have the Flying Frinton poking its synchro-smoke out of the exit while its brake van is still in view at the entrance.

And while we're talking of tunnels, there is no harm in repeating the old warning about access to the trains and tracks from underneath. I have sketched a quite simple arrangement which could be easily cut from softboard. As a refinement there could be a guard rail of thick card or previously dampened hardboard all round the opening.

An alternative idea is to fix a piece of cloth underneath. One end of the cloth is fixed with tacks and the other with hooks, so that removal is quite easy.

There is a small goods depot, but I have extended the coal yard facilities a bit further than average. It always struck me that any town or village dependent on the typical model coal supply would have a pretty freezing time in the winter. Our models must compromise on sizes, of course, but I feel that one truckload of best nuts isn't going to get very far. Even in a synchro-smokeless zone.



Hurricane 1 R4194 of 615 Squadron served with the unit from mid-August, 1940, until December. It wore brown and green camouflage with sky undersurfaces. Code letters were medium grey, spinner black.

PROFILE

Summer, 1940: colours and markings

THERE is no denying that to most people the Battle of Britain means fighters, and fighters means Spitfire, irrespective of more logical reasoning, so in our survey of markings of that famous summer let us first consider the Spitfires, and follow through the 1940 trend.

When the year opened, fighters were wearing dark green and brown camouflage with, when viewed from above, the port undersurfaces black and the rest white. No roundels were carried on the undersides, and sometimes the white areas were silver, a left-over from earlier schemes. N3249:GR-P carried standard colouring, and had dark grey codes. Squadron letters were ahead on the port and aft on the starboard side of the fuselage. Spinners were invariably black and no fin stripes were yet carried.

When the German offensive began in May, GR-P retained her colours, but with additions. Yellow surrounds were added to her fuselage roundels and long fin stripes applied. Variations occurred as units interpreted the orders differently and hastily. Evidence suggests that a few aircraft had the revised markings prior to May 10, but in any case the attack hastened the changes which were applied to N3265: GR-R, another of 92 Squadron's aircraft.

By June there was evidence of further change when the white on some fighters was changed to pale blue, but many were now flying with all-silver undersides, eg N3267:XT-S of 603 Squadron, which applied its unit letters ahead of the roundels in smaller size than the individual letters. Not long after silver undersides were common, appeared a new hue, the duck egg blue shade later known as sky. There were variations in the tints used, which led to duck egg green being mentioned when the tone was darker, and later in the war the shade specified as Sky Type S was of lighter colour and less green than that usually worn in 1940.

N3043:LZ-K of 66 Squadron was one machine recorded in August, 1940, with standard size codes and roundels, including those beneath the wing tips which appeared in late July. Some Spitfires of the period carried larger diameter roundels than usual. Many of the Spitfires that I saw belonged to No 19 Squadron, coded QV. Usually the codes were a dark shade of grey, with QV forward on both sides of the fuselage, in itself a less usual feature. QV-K:P9386 was one which replaced the interesting two-cannon Spitfires with which 19 was experimentally equipped and which included R6924 and R6958. Two cannon poked from their wing leading edges unfaired and the Spitfires had sky undersurfaces. X4474 was one of the replacement eight-gun aircraft and wore lighter codes than was usual.

By October, machines were leaving the factories with shorter fin stripes and standard-size roundels and entering the squadrons. During the summer months there were still Spitfires in service without even the yellow surround, for example R6769: PR-D of No 609 Squadron used in this state in July and August. P7493:LZ-F served No 66 Squadron in October and November, 1940, with standard colours and lettering, and L1059:OU-B of 266 Squadron from June to late August with silver undersurfaces may be taken as typical of its period. Successful Spitfires, where claims to enemy aircraft are considered, include N3234 of 19 Squadron and L1065 and R6691 of 609 Squadron.

Hurricane markings bore general similarity to those of Spitfires. P2579 of 73 Squadron had white and black undersurfaces and a grey letter J aft of its fuselage roundel in grey with, later, TP ahead. On the starboard side the placing was reversed. Underwing roundels were added to this machine and a yellow surround to its fuselage roundels. P3144:GZ-B had extra large grey code letters in July, 1940, GZ ahead on the port and aft on the starboard side. A black/white Hurricane was P3408 which fought with 85 Squadron throughout the Battle.

Hurricanes sported a wider assortment of fuselage roundels than Spitfires, possibly because of the space available. P3209: SD-T (SD ahead both sides) had standard roundels, and others with sky undersurfaces and standard-sized roundels included P3774:TM-V and P2946:VK-A of 238 Squadron used during July. The latter had VK ahead on the port and aft on the

starboard fuselage sides. JX-B:P3395 of No 1 Squadron used in October and November had the specified size roundels and short fin flash. P3055:US-P with sky undersurfaces had extra large code letters in September, but these were of standard size by December. Into 1941, some Hurricanes were flying with black and light blue undersides, eg V7104:UF-B of 601 Squadron.

Defiants followed the aforementioned schemes, and in the last week of July, 1940, I first recorded one with sky undersurfaces, in the hands of 264 Squadron. At this time many had silver undersurfaces and some with blue and black or white and black were still to be seen. Examples of two-scheme aircraft were L6957:PS-T, used in the famous engagement on May 29, 1940, with black and white undersurfaces and grey codes, and L7013:PS-U, with sky undersurfaces. Code letters were mid-grey.

At night it was the task of Blenheims particularly to defend Britain. Almost all were Mk 1Fs with a tray of belly guns. They wore day fighter colours, L8674:NG-C having black and white undersurfaces in May, 1940. L8608:NG-E, in use by the end of June, 1940, was in sky finish. A new shape that appeared on the squadrons in September was the Beaufighter 1F. Late in September, R2070 was recorded as FK-Y, the FK being aft on both sides of the fuselage in mid-grey. Beaufighters entered service in day fighter colours, green/brown/sky.

The 1940 Battle did not only concern fighters. Far from it, for the green-brown-black Battles, Blenheims, Wellingtons, etc, valiantly fought over France and Flanders and in the summer. P9274:LN-N with black undersurfaces terminated at the fuselage base was in use in May and June, 1940, for operations from Newmarket, LN appearing aft of the roundels in light grey. Most Wellingtons had by now lost their underwing roundels, including this one. By September, 1940, some Wellingtons had the rear fuselage sides painted black as an anti-searchlight feature. T2739:LN-E featured this, and was by the end of the year wearing entirely black fuselage sides and fin and rudder, the fuselage marking terminating in a wavy line.

Less usual viewing in 1940 was a Lysander, although for me there was an opportunity to see them on daily dawn and dusk patrols searching for signs of the invasion. P1684:UG-A served in France in May, her green and brown camouflage extending under her fuselage. These were replaced by black and white when she reached England, and when she was at Cambridge in August, 1940, her undersurfaces were resprayed sky. Her roundels were at this time very large. Gone were the side covers for the spats, and the stub wing racks carried small bombs. N1244, likewise coloured, had UG beneath the canopy and K aft in mid-grey. Other reconnaissance aircraft, like the Sunderlands N9044:KG-C and N9048:RB-B both serving in September, had sky undersurfaces at this time and dark grey planing bottoms. Their upper camouflage was green and grey.

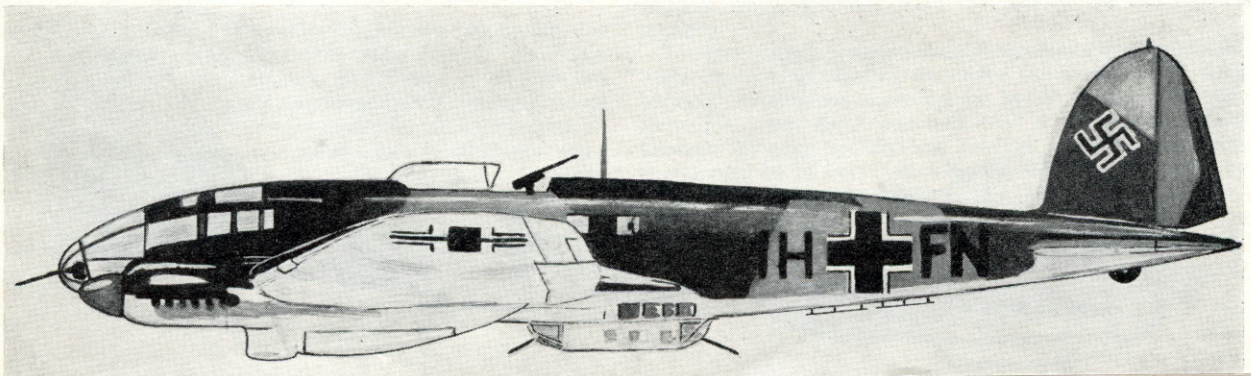
Trainer marking varied little in 1940. Standard colouring was green, brown and yellow, the latter extending half-way up the fuselage sides, as on Anson L7959:L of No 2 AONS, the L appearing aft in light grey. N5173:TX-F (TX aft) of No 11 OTU had similar colouring, except that black replaced the yellow.

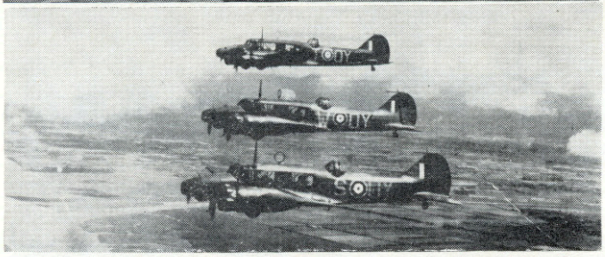
Top to bottom: *Spitfire X4474 of No 19 Squadron photographed in September, 1940, at Duxford. Note the long fin stripe and small wing-tip roundels. Spitfire 1s of No 610 Squadron wearing larger than usual codes and different fin stripes. DW-K is almost certainly N3289, used by the squadron in May, 1940. Spitfires of No 92 Squadron coded QJ taxying out for take-off. QJ-Y, nearest, might be P9363. An interesting point is that this has QJ ahead of the starboard roundel, whereas the machine behind has it to the rear.*

Whereas detailed camouflage patterns laid down for British aircraft were usually adhered to throughout their service careers, the Luftwaffe received its aircraft in ex-factory markings, and often redecorated them so that the 'splinter camouflage' of zig-zags appeared above the wings of bombers and sometimes down the sides on only a fair proportion of their aircraft. Bf 110s appeared to have the scheme in full quite often, but the first Heinkel 111 which I looked over had an all dark green upper surface and was light blue below. Some which had fought in the French campaign were similarly clad. Usually the third of the four letter/number unit coding on bombers was in colour or outlined in colour, but again there were exceptions and all-black codings. Ju 88s seemed to conform more with the splinter scheme, possibly because many were but recently brought into service.

Continued on next page

Heinkel He 111 of II/KG 26 used during September, 1940. Again she has splinter two-tone green camouflage and a red 'F'. Neither this nor the Ju 88 carried Werke Nrs on the fins, but both had their Geschwader crests on the noses. The shield on the Heinkel was red and the lion motif and lettering was black.





A Messerschmitt Bf 110 5F+CM **(top)** *captured in 1940 after a forced landing near Goodwood race track. She wears the usual light blue and grey mottle finish, and had two-tone green splinter camouflage above her wings and tailplane. C, the individual letter, appears beneath the wing-tips in black. Three Ansons* **(above)** *of No 48 Squadron on patrol in 1940. Note the slight variations in fin stripe slope and the narrow yellow roundel outline. Camouflage was green and brown and duck egg green beneath. Code letters were medium grey.*

PROFILE—*Continued*

Bf 109s and 110s had either mottled dark and light grey upper surfaces or this scheme on the fuselage top, with splinter camouflage above the wings. Many of the 109s had a pale yellow nose, or underside to the nose, more of a tactical than unit identification. Some 109s were brought down wearing factory coding, usually they carried unit badges and rank bars or chevrons for individual identity.

Junkers 87 Stukas, like the other bombers, had two-tone green splinter and blue or dark green and blue camouflage with black codes. Stuka Geschwader codings at this time included St G1:6G, St G2:T6, St G3:S7. As on other machines, sometimes there was a stencilled black, white or grey werke nr in full or shortened on the fin. Bomber markings were also carried by the assortment of Heinkels, Junkers and Dorniers employed on coastal duty.

No consideration of that never-to-be-forgotten summer can surely be complete without some account of the fighting, and so Profile ends with this brief outline of the fighting on September 15, now Battle of Britain Day.

In 1940, the day dawned sunny, but as it wore on cumulus clouds gathered in scattered groups at 4-6,000 feet. Fighting began a little before midday, when the plan—embracing an onslaught on London by units of Luftflotte II—began to reveal itself. About 700 sorties were to be flown by supporting Bf 109 and 110 fighters. Raids were designed to take place as the whole of Nos 11 and 10 Groups were in action and unable to hold back reserves. In fact, there was a break between the two strikes, giving Fighter Command time to refuel for the second engagement.

At 11.30 hours the enemy began to reach the English coast. Seventeen squadrons took-off to intercept, among them five flying as one Wing from Duxford and 11 of No 11 Group. Nos 72 (coded RN) and 92 (now QJ) Spitfire squadrons over Canterbury were first to engage, quickly followed by 603 (XT) over Dover, with 253 (SW) and 501 (SD) over Maidstone. Six reserve squadrons then did battle over the Medway, and the first wave of enemy bombers fell into the jaws of Nos 17, 73, 257 and 504 Squadrons of Hurricanes. Soon after, the large Wing from Duxford engaged, Spitfires going for 109s and the Hurricanes attacking the bombers which released their loads between Beckenham and Westminster. As the enemy turned for home he was harried by four more squadrons.

At 14.17 hours, German bombers again crossed the coast in three formations between Dover and Dungeness. One was intercepted by Hurricanes near Canterbury and over Maidstone. Nos 43 and 601 Squadrons went into action over Edenbridge, but most of the fighting took place between Dartford and Central London, where 15 squadrons gave battle to the third enemy formation. As the German force turned towards its bases after bombing London the RAF again did battle.

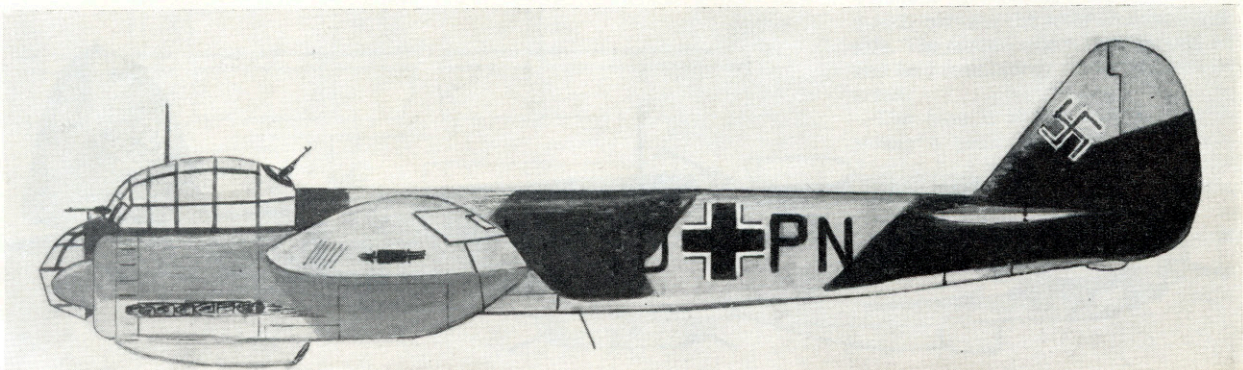
Involved in the afternoon attack were 20 He 111s of II/KG 53 (coded AL) based at Lille, 14 Do 17s of II/KG 3 (5K) from Antwerp/Duerne, 27 He 111s of Iu II/KG 26 (1H) from Gilze Rijen, 23 Do 17s of III/KG2 (U5) Cambrai, 18 Do 17s of II/KG 2 (U5) from St Leger and Ju 88As of II/KG 30 (4D) from Gilze Rijen. Escorting them and covering them were Bf 109s of JG 2, JG 3, JG 26, JG 27, JG 51, JG 52, JG 53 and 110s of ZG 76. Their recorded losses were 26 Bf 109s and three 110s.

During the afternoon, 26 He 111s of III/KG 55 (G1) had set off from Villacoublay and by careful route planning escaped RAF attention until after bombing Portland. In the early evening, a small force of escorted Bf 110s of Kampfgruppe 210 headed for the Spitfire works near Southampton, and five squadrons engaged them after they had missed their target. Attacks on shipping were also delivered by small numbers of aircraft, including He 111s, Ju 88s, an Fw 200 and an He 115 floatplane operating from Norway, which attacked two ships off Scotland. Ju 88s of Wekusta 51, flying on weather reconnaissance, were also about their work.

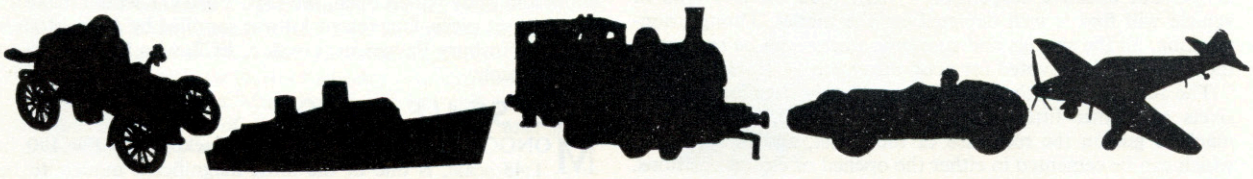
From our present safe and distant viewpoint, the Battle of Britain is an event packed with interest—and poorly recorded pictorially. We appeal, as often in Profile, for anyone who may have some photographs of the period showing its aircraft to contact us, for there are so many model makers who would enjoy producing replicas of the machines of that time.

M. J. F. Bowyer

Junkers Ju 88A-1 of Kampfgeschwader 30, used in September, 1940. Her splinter camouflage came down the fuselage sides and consisted of two shades of green, both quite dark. The letter 'P' was in red, and the aircraft came from II/KG 30.



New kits and models



VALUABLE AID

PRESSURE sensitive lettering has already established itself as an extremely useful aid to modellers. Now, Blick Office Equipment have produced a range of small sheets (which will be launched at the forthcoming National Model Show) designed specifically for model makers. The sheets—known as Blick modellers' Dry Print—measure 2¾ inches by 5 inches, and cost 1s each. They are supplied in a transparent packet, which also contains details of the full range together with instructions and suggestions for use.

The initial range is made up as follows: Slot car numbers in black and white to both 1:24 and 1:32 scale; railway lettering and numbers in black, white and gold in both 1/16th and 1/8th inch letters (two type faces are available, a sans serif Gothic letter and a Roman letter); and a series of stripes in red, white and gold in thicknesses from 1/64th to 1/8th inch (the stripes are 8⅛ inches long and sell at 2s per sheet).

The suppliers say that this is only the beginning of a range that will be added to in the light of experience, and which will later include multi-colour dry transfers and many other variations. Blick modellers' Dry Print will be available through most model shops. *D.R.*

ROLLS-ROYCE PHANTOM II

ONE of the most respected names in the entire motor industry is Rolls-Royce. This company has won such a reputation for itself that it would seem justified to expect any model of one of its cars to be of equally high quality. In this respect one of the latest American Monogram kits to arrive in this country has really succeeded; it is a magnificent 1:24 scale replica of a 1931 Rolls-Royce Phantom II Henley convertible.

The strikingly boxed kit includes no less than 174 highly detailed parts, moulded in black, silver-grey, 'chrome' plated and transparent plastic. Working features include opening doors and rumble seat cover, revolving wheels (steering at the front) and steering wheel, and a removable bonnet. The detailed engine's features include manifolding, a carburettor and a magneto, and it is moulded in silver-grey, along with most other mechanical parts.

Plated plastic features on the beautifully detailed wire-spoke wheels, headlights, bumpers, radiator and trim, while the body and chassis are black. Transparent parts include the divided windscreen and the light lenses, even the side-lights having separate lenses. The front leaf springs are thin enough to act as a springing medium and, although the modeller does not have to build it up, the front suspension does work.

The interior features well-moulded 'hide' covered seats, a carpeted floor and full controls and instrumentation. The Rolls may be finished in either of two ways: the hood may be fitted erect or, alternatively, stowed away beneath a cover, and the cockpit left open. Either way, this is a most handsome miniature, 9¼ inches long, and is a real showcase item. Price is 39s 11d in this country, and it is available from BMW Models of Wimbledon, who supplied our sample. *D.C.N.*

JAPANESE AFV

WHAT is probably the first model of a Japanese tank to become generally available in Britain has just made its appearance in the Aurora 1:48 scale range of military vehicles. The tank in question is the Type 97 Medium Special, though Aurora describe it on the carton and in the kit instruction leaflet as simply a 'Japanese Medium Tank', which does not do justice to an otherwise excellent presentation.

There is a well illustrated building sequence, and assembly is quite simple, so that the kit can be safely recommended even to

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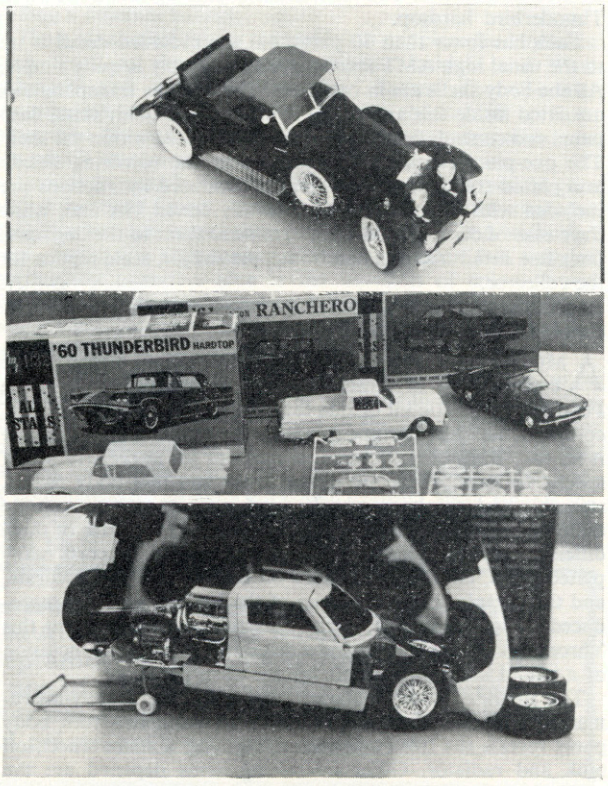

Monogram's 1:24 scale 1931 Rolls-Royce Phantom II, and three new 1:32 scale AMT car kits (all from BMW Models); and 1:25 scale IMC Ford GT in course of construction (from Auto-Models).

younger readers. Features of the model include authentically patterned moving tracks—with an almost invisible join—and rotating wheels and return rollers. Those not familiar with the simple but effective suspension system used on this type of vehicle will find it well depicted on the model. Though non-working, all the springs and suspension arms can be seen, with the centre bogies pivoted for good measure.

The remainder of the model is excellently detailed, with all rivets and other fittings accurately positioned, including the machine gun in the rear face of the turret, and hatch covers which can be cemented in either the opened or closed positions. There are also a commander and three infantrymen as useful 'extras'. The decals provided in the kit are questionable, and no painting instructions are given, but otherwise the completed model is well worth adding to a collection. Quite apart from this, more experienced modellers will find that the kit is a good basis for several conversions.

Our sample was supplied by Auto-Models Ltd, 70 Finsbury Pavement, London, EC2, who also have other models in the same series, including the Centurion and Patton. Price is 12s 6d for each kit. *C.O.E.*

1:32 SCALE FROM THE STATES

WITH the growing number of complex and expensive models that are coming on to the market, it is almost something of a pleasant change to see some introduced that obviously have the beginner in mind. Recently submitted for review by BMW Models of Wimbledon were three new American AMT car kits, each selling at 6s, which are some of the simplest—though still extremely well detailed—that we have come across. The cars are all to 1:32 scale, and feature a 1965 Ford Mustang 2+2 fastback, a '61 Falcon Ranchero pick-up and a '60 Ford Thunderbird hardtop.

Each has fewer than 30 parts, but the moulded detail is up to the usual high AMT standard, and assembly is quite simple. All the body shells are in one piece. The window transparencies are fitted inside this and then the interior tub (with seats, dash panel and controls cemented in place) is located within the shell. The one-piece chassis follows, and then the revolving wheels and plated trim are added. Clearly illustrated instructions are included with each of these colourfully boxed kits and, while their ease of construction must commend them to the beginner, their fine detail makes a handsome, yet simple, scale replica for the collector. *D.C.N.*

FASTEST FORD

AMONG the most publicised, and certainly the fastest, of the current crop of Grand Touring competition cars is the Ford GT. A plastic kit of this car, made by the American IMC company, has just become available here, and a very fine one it is, too. Built to 1:25 scale, it includes an impressive set of special features. There are hinged front and rear body panels, steerable and revolving wheels, working suspension, accurate tread Dunlop racing tyres, opening doors and a choice of three different engines. Whichever engine you choose, it sports many plated parts, the moulded detail on each is fine and accurate, and the complex exhaust system of the V8 is beautifully reproduced. The suspension parts are also moulded from this 'chromium' plated plastic, and a delightful touch is the inclusion of a plated instrument insert for the dash panel.

The interior is fully detailed, with controls, a fully-instrumented dash and seats. As it hinges forward, the front body panel reveals the front suspension, steering, a spare wheel, oil tank and radiator. Other interesting items depicted are the chromed filler caps, disc brakes, coil springs, tank inspection covers, piping and panel and rivet lines.

Another addition, and something providing a good idea for displaying the finished model, is a miniature quick-lift racing jack. With the jack under one end of the car, a wheel off, and doors and body panels open, the IMC Ford GT would make an excellent set-piece. Our review kit was supplied by Auto-Models Ltd, 70 Finsbury Pavement, London, EC2, who have stocks at 24s 11d each. *D.C.N.*

1:48 SCALE Fw 190

MONOGRAM'S latest release, a Focke Wulf Fw 190 in 1:48 scale, is one of the most magnificent models to be produced in recent years. Their latest effort in the quarter-scale line, which features types such as the Hellcat, Corsair, Zero, Bf 109, Spitfire, Hurricane and Tomahawk, to mention a few, is an excellent kit and worthy of the attention of all aircraft model makers, no matter what scale they are addicted to. Not only are parts provided for no less than six different versions of the Fw 190, but they also provide matt transfers, an innovation which other manufacturers could well follow.

Containing 64 beautifully detailed parts, this kit also provides the model maker with a full range of moving parts. These include a retracting undercarriage and flaps, but not moving elevators or ailerons, which is perhaps a little surprising. Extra parts for bombs, cannon, machine guns and long-range tanks provide the model maker with sufficient to construct either the Fw 190A-7/R3, Fw 190A-7/R2, Fw 190A-8/R1, Fw 190A-8/R3, Fw 190A-5/U8 or Fw 190A-5/U3 variants.

The instruction sheet is fully detailed, and accurate camouflage drawings are provided for all six variants, so that even the beginner can easily see how to construct the kit. The Monogram Fw 190 can be obtained from several model shops, but if you have difficulty BMW Models of Wimbledon have stocks, (and supplied our sample) at 13s 6d. *A.W.H.*

DIFFERENT DECALS

THE first samples to be released from the Stein Associates Aircraft Decals Company were quite good, but the second offering is even better. This time they have provided decals for four P-47 Thunderbolts, one Hellcat and two SPAD XIIIs. Both quarter and 1:72 scale transfers are included in the sheet and, with the exception of the Hellcat, there are models available in both scales for the conversion enthusiast.

The markings for roundels and fin flashes provided with these kits will have to be used for the national insignia—Stein provide the unit markings, codes, victory flashes and small stencilled markings which are so difficult to produce.

The standard is very good, but the usual plea for matt transfers has once again been ignored. Apart from this, they adhered very well to the model I made up and at 8s 6d per sheet are worthy of attention from the discerning model maker. BMW Models of Wimbledon have stocks. *A.W.H.*

MORE NEWS NEXT MONTH

ACUTE pressure on space this month has prevented us from reviewing fully Revell's new kit of the McHale's Navy PT 73, and three more additions to their range of 1:72 scale World War 1 aircraft—the DH II, Morane Saulnier and Fokker Eindecker. We hope to be able to write more fully on these in our next issue.

Revell (GB) Ltd also announce that they have set-up a new Raceways Division, based on wide experience gained in the States, to advise companies interested in operating commercial slot-racing centres in Britain, and to control the ventures through to their opening. *D.R.*

Letters to the Editor

Letters to the Editor can only be answered in the magazine. Readers whose letters are published each receive a free Airfix plastic construction kit of their choice. We are always pleased to receive your comments and pictures, which will be considered for publication. Submitted material and pictures can only be returned if accompanied by a stamped addressed envelope, and the Editor cannot accept responsibility for safe keeping of any such contributions, neither does he necessarily agree with comments expressed by correspondents in the letters column.

Dealing with decals

WE happened to see the letter from S. Pope in the June issue of AIRFIX magazine about difficulties in applying transfers. Well, at first we could not see the difficulties, as transfers will automatically take up any surface unevenness down to about a 4 mm scale rivet, and are naturally cut with a knife to work over wagon trappings or car trim.

However, we realised eventually that the writer was referring to decals as supplied in kits—water slide film is, we believe, their correct name. We never have any trouble at all with these as, being self-supporting, they can be chopped and churned about at will.

But we never ever rely entirely on the fragmentary adhesive remaining after soaking; this may be adequate for plane surfaces free from static electricity, etc, but not for the general run of model work. We always lay these films on with gloss varnish, just like transfers, and have no problems of air bubbles, failure to take surface, or cracking.

Our method is to leave in water until the paper sinks, then to remove the decal and dry it on clean, hard blotting paper, a slab of plaster, or something similar. Then apply the varnish to the obverse and lay the decal. Any cutting or bending to negotiate high detail can be done with tweezers before applying varnish.

In fact, we rather prefer decals and wish they were more widespread in the model railway hobby! Those commissioned by Airfix are among the best available. Can the railway ones be made available separately please?

R. C. Ormiston-Chant and R. R. Cody, Roc Models, Manchester, 19.

Applying Ju52 transfers

IN reply to S. Pope's letter (June issue) concerning transfers, I found the same difficulty when making the Airfix Ju52. My simple remedy is this: after taking the transfers out of the bowl of water, leave them on a sheet of blotting paper for a few minutes until most of the water has drained off. Then put them on to the plane in the usual way. You will find that they stick to the corrugated skin soundly and well.

Now for *my* problem. I am sure that it has been asked before, but nevertheless I have always found it extremely difficult to obtain good fine lines on aeroplane cockpit canopies. I would therefore welcome any suggestions from readers.

To add to the ever-growing list of suggestions, how about a few more helicopters in the Airfix 1:72 scale range, eg the Hiller, Dragonfly and Wasp? These would make excellent additions to any collection.

Finally I would like to congratulate Airfix for their wonderful magazine, which I look forward to each month.

A. S. Clarke, London, NW3.

Building veterans

I AM a keen modeller of veteran cars. It is difficult to find enough kits to build, so I spend a lot of time altering and adapting basic kits to suit various forms of each model. For these and the original model I have to find accurate references.

I think it would be an admirable idea for Airfix to provide, with each car kit, a coloured photograph (similar to popular postcards on sale at about fourpence) of the actual vehicle from which details were taken and, if possible, information as to its whereabouts. This would be a great improvement on an artist's 'free' illustration for the true scale builder.

As hints to the builder of veterans, I would say that I never use gloss paint, as this tends to obscure fine detail. I paint the car parts in flat, drawing fine linings with a sharp pencil of the correct colour before covering with a couple of coats of clear gloss to obtain a good deep shine. This gloss, by the way, will even cover water colour with perfect results.

Tonneaus and straps are cut from samples of 'plastic' leatherette. Head-

Continued on next page

ACTION-PACKED ENTERTAINMENT AT THE NATIONAL MODEL SHOW

IN addition to receiving a free Airfix plastic construction kit of their choice, readers who have letters published in this issue of AIRFIX magazine are also being sent a free double ticket for the forthcoming National Model Show, which is being held at the New Horticultural Hall, Vincent Square, Westminster, London, SW1. It will be open from 10.30 am to 9 pm from Tuesday, August 24, to Friday, August 27, and from 10.30 am to 6 pm on the last day, Saturday, August 28. Entrance fee is 3s for adults and 1s 6d for children under 14.

Airfix Products Ltd are exhibiting at the Show on stand 65, where modellers will find plenty to interest them. In addition to displaying a wide range of Airfix kits and MRRC slot racing equipment, there will also be a four-lane 40 ft slot racing circuit. Visitors to the show who buy any Airfix product will be handed a special form, entitling them to try their skill on the Airfix Motor Racing circuit. After completing one lap, competitors will then qualify to take part in a simple free competition, for which attractive Motor Racing prizes will be awarded judged on lap times and the completion of a simple quiz.

Purchase of either AIRFIX magazines or catalogues from the stand will entitle the buyer to take part in another free contest, with kits up to the value of 17s 6d as prizes. The names of prizewinners in both competitions will be published in the October issue of AIRFIX magazine. Other features of the Airfix stand will include several converted military vehicles, specially made by AIRFIX magazine's military modelling expert, C. O. Ellis. Entry forms for the AIRFIX magazine model photographic competition will also be available on the stand.

Stirling Moss and British Rail's driver Hopkins, one of Britain's top express train drivers, will jointly open the Show at 11 am on Tuesday, August 24. They will then tour the exhibition, when visitors will have the opportunity to slot-race against Stirling Moss, and will also be able to watch driver Hopkins at the controls of some of the many giant railway layouts that will be exhibited. Those unable to attend on the first day will still have the chance to meet motor racing and railway drivers, as a number of them will be visiting the Show during its run, together with many well-known television, film and stage personalities who are model enthusiasts.

Apart from the number of large-scale model car racing tracks, on which all visitors can take part in races with the experts, the British Hot Rod Association will be demonstrating a model drag strip. There will also be an exciting array of model railway layouts, plus constant demonstrations of model-making with kits of all types. It all adds up to an action-packed Show that should not be missed by modellers!

Letters to the Editor

Continued

lamps, handles, buckles and stays are formed from paper clips and staples. The more detail the more 'veteran' these cars look!

When are we going to get more Airfix veterans—how about some vans and lorries or a conversion kit to make a single decker of the B type?

M. H. Poole, Tetbury, Glos.

All lit up

I HAVE often found that you cannot put lights in model aircraft.

If you want to light up your bomber—I did this with the Mitchell, and it looks good in the dark—you should paint the interior of the bomber with luminous paint (note not flooring and windows) then build it.

Leave the model under a light for about half an hour, or longer, then switch the light off. The cabin and interior lights up most realistically!

Richard Zachary, Wembley, Middx.

Van from a Viva

READERS may be interested in a conversion I have made of an Airfix Viva to a Bedford Beagle van. I must, however, point out that it is not a completely accurate conversion, but provides a reasonable model for those who require a 7 cwt van on their 1:32 scale layouts.

All parts are cut from thin card. Firstly complete stages 1-25 as per instructions, but omitting parts 26 and 38, painting all interior details beforehand. Then file the rear side window surrounds and the roof drainage ridges behind the doors flush with the sides.

Next cut two rectangles for the side panels, 14 mm × 50 mm. These are cemented over the rear windows, the front level with the front edge of the rear windows and the lower edge level with the bottom of the rear windows. A piece of card 72 mm × 34 mm is cemented over the Viva's roof, and along the top edges of the new sides, to form the new roof.

The rear body wall dimensions are as follows: base, 40 mm; height, 15 mm; top, 34 mm. The sides taper at equal angles towards the top. Window apertures are cut with sides parallel to the body sides and the inward sides vertical, 5 mm apart, the other sides 2 mm from the parallel side. A piece of clear plastic is cemented behind this, and the whole cemented between the sides and roof, resting on the boot lid.

Cement a suitable spare wheel in a cradle under the rear floor, add parts 42-52, and paint the finished model. Finally, paint a thin black line down the centre of the rear body to indicate the division of the rear doors.

P. Cutler, London, NW10.

Record breaker

I HAVE just completed the making and running-in of one of the MRRC four-wheel drive Mercedes W154 kits.

Just to show how good it is, on one of its first laps it equalled the standing lap record of 5.3 seconds. After five laps the record stood, and still does, at 4.7 seconds!

K. Schofield, Solihull, Warwks.

Three tips

AS a builder of plastic car kits, I have three tips that may be of use to readers.

The first is concerned with making detailed tubular chassis for display models. For these I use plastic cocktail sticks as made by Deeko. These come in very nice clear plastic boxes (which are useful when empty) at 2s 6d for about 100.

The second tip concerns getting an accurate representation of BRM green. The base is the new Humbrol BRM green (essential). Add to this a little silver, medium blue, and finally black. This makes it almost impossible to tell from the real thing.

The third tip is on rubbing down paint. I use first Goddards plate powder to cut the surface down, then Goddards Silver Foam, which gives a final polish. Both give a very professional finish.

Finally how about a few Grand Touring cars in the Airfix 2s and slot racing series?

Michael J. Stinton, Chesham Bois, Bucks.

Car converting

SEEING that everyone seems to be converting model kits, and never having tried to myself, I thought I'd have a go. So I bought an Airfix MG 1100 and proceeded to convert it to a Morris 1100.

As the lines are very similar, it made it an easy first attempt. The only visible difference between the two models is the bonnet and grille (the Morris has a flat bonnet and a larger grille with horizontal bars). I began by using fine sand paper and I sanded down the raised section of the MG's bonnet. I then sanded down the raised section around where the grille fits until it was flat.

I made the new grille required for the Morris by cutting a piece of cardboard to the required shape. (I found out the correct shape by looking at the real car in showroom windows). Then I split some match sticks with a knife into fine strands, and glued them side by side horizontally on to the cardboard to represent the bars of the grille.

After it was dry, I used some chrome sticking tape which I bought from a cycle store and covered the new grille with it, making sure not to hide the lines of the grille by running my finger nail back and forward over it.

Of course, if you wanted to, you could just use silver paint instead. I found that the new grille will bend sufficiently to meet the contour of the car. I stuck the grille into place and then, using another thin strand of a match stick, glued it on to the bonnet to represent the line that runs down the centre of the bonnet on the Morris 1100. I made the badge for the bonnet from scrap plastic.

Finally I sandpapered the name MG from the boot of the model, and painted the car grey with red seats. As I have said I had never converted a model car before. I found this particular conversion easy, and it gives you a lot of satisfaction to try this new approach to model construction.

E. Jones, Stoke-on-Trent, Staffs.

24 into one

REFERENCE was made last month to the latest titles available in the excellent range of Aircraft Profiles, which are now being added to at the rate of six a month. The first 24 titles have now been combined in a beautifully bound, colourfully illustrated stiff-back book, selling at three guineas.

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Pen-friends wanted

THE following readers have written to the Editor requesting pen-friends. Ian Johnson, of 32 Perth Street, Ngaio, Wellington, New Zealand, wants a pen-pal in any English-speaking country, aged 12-18, who is interested mainly in building model planes and OO/HO scale kits. A. F. Hamford-Waters, of 24 Compton Road, Hayes, Middlesex, England, would like to correspond with an American modeller who, like himself, is interested in plastic model aircraft (military, and pre-1945), military models, wargaming and model railways. Interested readers are invited to establish contact direct, at the addresses given.

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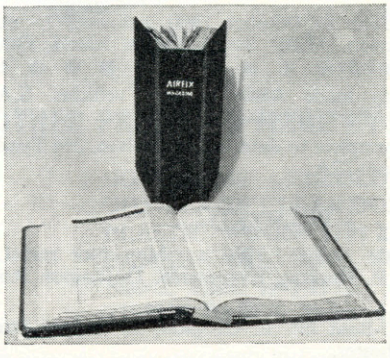

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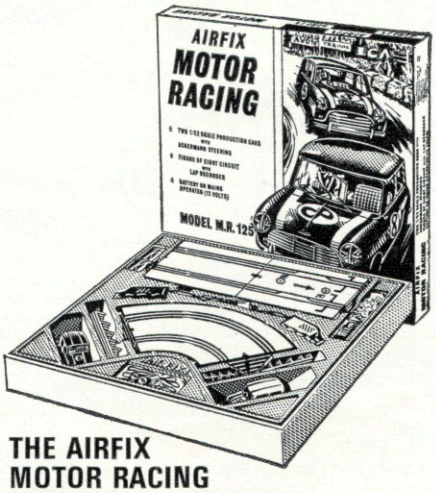

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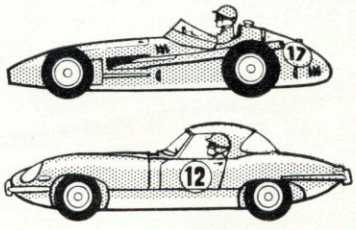

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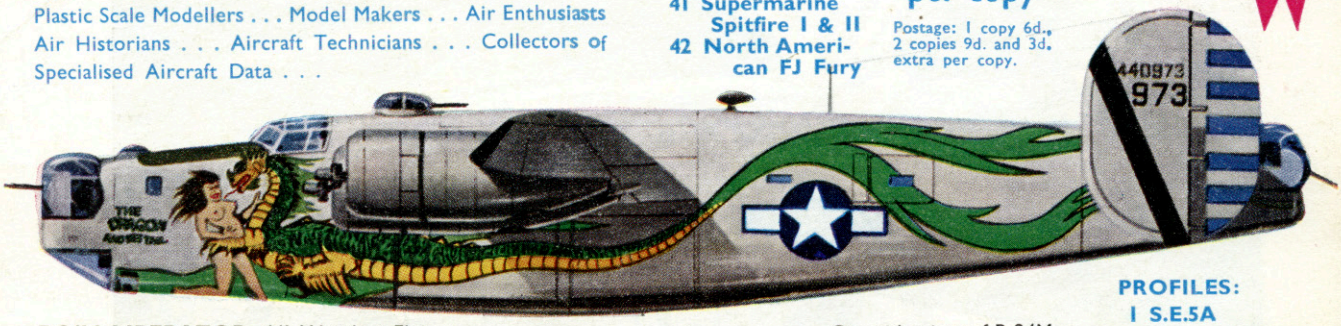

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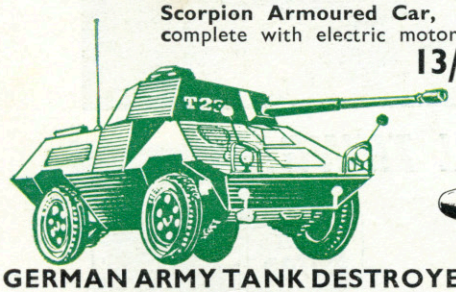

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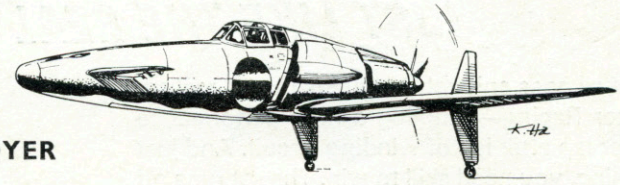

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